

CURRICULUM, EFFECTIVENESS, EQUITY

EDITED BY:

ANIKÓ FEHÉRVÁRI

HUNGARIAN INSTITUTE FOR
EDUCATIONAL RESEARCH AND
DEVELOPMENT



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Foreword

The Hungarian Institute of Educational Research and Development has played an important role in the planning and utilisation of resources available from the European Structural Funds over the past decade. The mission of our Institute is to assist policy makers with evidence-based research. HIERD's wide-ranging research and development projects carried out in recent years encompass all areas of education and giving rise to several volumes of professional and scientific findings in support of decision-makers and higher educational providers, and offering information to the Hungarian public and, no less importantly, to all groups of teachers. International embeddedness has been an important feature of the R&D process: we have kept abreast of the international trends and processes in our areas of research and development, and placed our own findings in the international space. This volume of papers in which we attempt to give a synthesis of our latest research output is another station along this road.

The book addresses two major issues. Chapter One is about curriculum development. The papers in this chapter are focused on specific areas of training, and highlight the costs of new policies if they were to be implemented across the entire educational system, and point out other ramifications in, for example, teachers' initial training and continuing education.

The first paper is about the development of historical thinking. *József Kaposi* points out that rethinking history teaching should be put on the agenda: the development of historical thinking also affects other disciplines, it helps understand the structures of past, present and future, and promotes development of transversal competences such as problem solving. The paper also explores the ways of incorporating these novel features in curricula and in teacher training.

The next four papers in this chapter present the result of a three-year developmental process. In order to support the professional work related to the introduction of the all-day school, HIERD developed several educational programmes between 2012 and 2015 that assist with the organisation of extracurricular activities for primary school students. The paper by *Andrea Pallag* present the complex art education programme. Embedded in practice, the newly developed programme was piloted in nine schools. Its effectiveness was verified by impact analyses. *Mónika Réti's* paper describes the development and piloting of a novel science programme. The special feature of this programme is that the methodology it applies also comes from science: soft systems methodology. Extended schools related programme development is at the core of the paper by *Janka Kalocsai*. In the context of a qualitative study she explores the possibilities of integrating the knowledge related to teaching newly developed educational programmes into the systems of initial

and continuing teacher training in the most efficient fashion. The author also takes stock of the barriers in the way of implementation. *Attila Varga's* paper leads the reader into the realm of the economics of education. After the pilot phase of all-day school development with the participation of 55 schools, the author analyses the factors necessary for the expansion of the system together with the costs involved.

The last paper in the chapter was written by *Márton Bodó*. The previous papers also touched upon teachers' attitude to new educational programmes. This question is the focus of this study. Hungary introduced compulsory community service in 2011 in secondary schools. Unravelling the findings of qualitative and quantitative research, the author presents teachers' views, attitudes and involvement. He underscores that teachers consider community service important, yet the effectiveness of implementation is wanting.

Chapter Two of the book addresses problems related to the education of disadvantaged groups. Connecting to the previous chapter, Chapter Two presents how curriculum development and enrichment programmes promote the educational effectiveness of disadvantaged groups, and identifies the school-related factors contributing to disadvantaged students' more successful learning. This chapter looks beyond public education. It describes the groups which are considered socially or otherwise disadvantaged in tertiary education in Hungary and explores their chances of being admitted to, and their subsequent presence in, higher education.

Relying on empirical data, *Anna Imre's* paper describes the effects of the all-day school (finishing at 4 p.m.) introduced in 2011. The author emphasizes that the effectiveness of extended school time and the positive effect of extracurricular activities and enrichment programmes is most conspicuous in the group of socially disadvantaged students.

Two papers conclude the topic of public education, both relating to effectiveness of education in schools where there is a large proportion of students of a lower social and economic status. Both papers measure effectiveness by educational or pedagogical added value. *Krisztián Széll* delves into the interrelations of school climate and effectiveness. *Anikó Fehérvári's* paper is from the perspective of the quality of teachers. Both papers emphasize the importance of schools' embeddedness into the local community and the effect of external relations and cooperation on effectiveness.

The paper by *Marianna Szemerszki* points out that higher education is generally decided by the choice of the secondary educational institution. She describes the groups considered disadvantaged in Hungarian higher education, and analyses the data from administrative databases to present an overview of application for higher education together with the strategies and chances of admission.

Editor

Skills Development Tasks and the Development of Historical Thinking

INTRODUCTION

The social and intellectual changes that occurred in the second half of the 20th century called for a re-interpretation of history – a scientific concept – which sheds light on the fact that “history is not only seeing, but also entails thinking over what is seen. And, in some sense or another, thinking is always interpretation.” (Lukacs, 2005. 57–58.) The concepts of the building blocks of processing the past, that is, sources have also changed: “historical data, sources, texts and facts are not self-evident. It will not suffice to put them together; they are more like witnesses of bygone ages that will not talk unless we ask them. It is sensitivity to problems and the ability to formulate questions that distinguishes [...] a good historian from a bad one.” (Gyurgyák – Kisantal, 2006. 32.) Memory, which is life itself, carried within by living groups, and thus is in continuous development (Nora, 2009), is the version of past preserved in individual or communal memories, either in written or unwritten forms, although what we call history draws on the individual or communal memory or relies on memory. It follows that the concepts of the past, memory and history cannot be regarded as one and the same thing, even if in everyday discourse they are often used as synonyms. This is all the more true since what we call history has evolved/is evolving through historiography, which means that it is a construct or narrative with subjective elements.

All this raises a fundamental question: what should we teach when teaching history? Most probably, we cannot teach anything else than that which was recorded of the history of millennia by some people at some point in time, and, being accepted by the community, has become historical fact (Carr, 2006) or a part of accepted scripts or frameworks/patterns of interpretation; in other words, it was incorporated in “the intellectual form in which a culture gives an account of its

own past (see: Lukacs, 2005). A key issue of teaching history, recognized by all, is the issue of preparing students for historical thinking – a phenomenon that was most probably recognized as early as at the birth of the individual cultures and civilizations. The myths that deal with the history of individual communities or people – beside creating a community identity and handing down the common set of social norms to the future generations – gave a framework of interpretation, as “history is not only seeing, but also entails thinking over what is seen. And, in some sense or another, thinking is always interpretation” (Lukacs, 2005). In other words, the dimension of interpretation and thinking, past and future is organically linked to processing the story of the past. Historical thinking is a part or basis of the historical mind that is created within the framework of life experience and formal school settings. Major building blocks of the evolving historical mind include getting to know and applying the dimensions of time and space, discovering the relationship between the actors and the story – skills that can be acquired after the age of 12 years – which then can become the basis of the so-called narrative understanding (Csapó, 2002/B). In the process, the ability to distinguish reality from fiction – an ability to be developed on a continuous basis – is of key importance (Kratochvíl, 2014. 205–209.). In higher grades – and, quite often, in the course of understanding the background of stories – a system of concepts can be established which, among others, consists of identifiable social categories, of understanding the basic structures of the specific social and economic interrelations of a given period and of the recognition of various historical points of view or perspectives.

Most probably, with regard to the evolution or the creation of historical thinking it is very significant whether during their studies students understand how an “everyday” event becomes an inevitable historical fact in the course of the working of collective memory, historical interpretation and processing and, in this system of interrelations, what causes and effects can be attributed to a specific historical fact. It is equally important for them to understand that it matters on what basis or from which sources (e.g. original documents, contemporary or later historiography) we get to know all that we know about the past (that is, history) and to what extent that which we know is confirmed by other types of evidence, processing or interpretations – in other words, how a given point of view can be identified. Among others, this is why it is of great importance to show students a multi-perspective approach. During their historical studies, students must realize a paradox, namely, that the events which take place in a historical time and space reflect, on the one hand, the ongoing presence or continuity of the past (e.g. in life conditions, ways of thinking and general approach to life and, on the other hand, the continuous change of the past (e.g. in technological devices or attitudes towards nature).

OPPORTUNITIES TO DEVELOP THE HISTORICAL MIND

The paradigm shift that has taken place in the fields of history and education in recent years basically re-interpreted the process of understanding history. Now it is widely accepted that historical learning does not only – and not primarily – comprise absorbing information related to history, but means the acquisition of a differentiated historical thinking.

It was decades ago that professional public opinion came to the conclusion that a basis of historical thinking is narrative competence which enables students to identify various schemes or scripts. This entails the acquisition of a differentiated historical thinking which enables students “to flexibly adapt, in the triple dimension of the past, present and future, the constructs (schemes) offered by history and to use the examination methods of history (identification and formulation a historical problem; criticism; interpretation” (F. Dárdai, 2006. 95–105.).

Due to narrative structures (time, story, characters, perspective, motivations) and story schemes or scripts that students learn about, teaching history is suitable for helping them acquire an adequate technique of learning and information processing. At the same time, as evidenced by research in social psychology, a narrative approach – through its stories that individuals can emotionally relate to and through shedding light on a common cultural code system – plays a key role in the creation of individual and community identity (Pataki, 2003).

The new approach to teaching history enables students to see and understand why people in the past felt, thought and acted differently from their descendants, the people today. History-related occupations help students understand that which is historically or culturally different. This requires the acquisition of a certain type of critical thinking so that in historical sources (written material or images) they can detect the authors’ motivations, partiality, subjectivism, etc. This interpretation of studying history, then, corroborates the understanding that people’s thoughts and actions depend on time, space and interests and that changes in history do not occur by themselves but through human action.

SKILLS DEVELOPMENT TASKS

The “development-type tasks” were introduced in mainstream research and development and the general Hungarian approach to learning and teaching in the mid-2000s. It was at that time that criteria were defined which set new development-type tasks clearly apart from tasks intended to measure students’ performance. Such criteria include, for example, setting up a motivating task situation, the use of “a structure of task sets”, the organization of students’ activities that are mainly

based on cooperation, and the concept which prioritizes learning experience gained during trying or looking for a solution over results that are quantifiable and can be transformed into grades.

However, as evidenced by the trials and the practical application of development-types tasks, everyday pedagogical practice is not yet adequately open towards the widespread application of such sets of tasks. In Hungary, current educational practice uses curricular/textbook content as a starting point instead of competences that develop general learning abilities. This holds especially true for education in social science. The demand for everyday practical application brought about the understanding that within (or without the general category of development tasks, tasks of a new type need to be developed which, as far as their general system of objectives and criteria is concerned, basically meet the requirements for development-type tasks, yet, to a greater or lesser extent, do differ from them. Such tasks focus on intellectual and methodological competences, and, as rule, do not emphasize the prioritized development of personal and social competences. Consequently, they do not necessarily require a “set of tasks” structure, cooperation-based group work or verbal presentation. Consequently, these tasks do not take a whole lesson to complete, only certain sections of it. These points were taken into consideration for the preparation of skills development tasks that focus on the improvement of key historical competences.

The process of the preparation of skills development tasks was significantly affected by the fact that learning and teaching history have undergone major changes in the last 25 years, especially in Western Europe (Strandling, 2001). The key competences related to history, identified in the course of the paradigm shift, fundamentally necessitated the acquisition of basic abilities that are required for processing and interpreting historical documents (written, unwritten, primary, secondary, texts, images, etc.) and for the evolution of critical thinking, as well the application of such abilities in problematic situations (Strandling, 2001). By now, it has become a major responsibility of teaching history to serve as a basis for the development of historical literacy which, being an adaptable framework of interpretation, makes it possible “for the events or processes dealt with or understood during history lessons to become well structured knowledge that can be effectively used and easily recalled in new situations” (Peter Lee, 2004; cit. Kojanitz, 2013. 36–37).

With regard to the preparation of tasks, another consideration was the understanding that it is worth processing historical content “in a manner that make students emotionally involved. This may not only provide motivation – a precondition of success – but, through “emotionality”, it also may become a bridge that connects the student with historical content (events, structures, processes) emotionally, and help him or her acquire historical thinking.” (Uffermann, 1999)

Skills development tasks are intended to develop transversal skills (critical thinking, problem solving, cooperation) and, at the same time, they are suitable for the development of methodological, intellectual, personal/social and communication competences, depending on the nature of the processing activities that derive from the relevant sources. The solution of the tasks is greatly based on involving students in activities, interactivity and productivity. As far as the cognitive dimension is concerned, the tasks require students to do meaningful learning and use competences that play a key role in the development of historical processes and interpretive scripts, as well as in the building up of templates that refer to background processes and in using such templates in other situations. With regard to the emotional dimension, the tasks – through “evoking involvement” and through the recognition of trying as a solution or result – attempt to create flow experience. The professional and educational significance of skills development tasks may be attributed to the fact that they apply methodological solutions which foster students’ interest and motivation and, at the same time, due to involvement and novel problem situations, require challenging intellectual effort. In addition, while good solutions carry an emotional quality, the process of learning itself also brings about emotional enrichment.

It is a key feature that – as opposed to conventional practical tasks – skills development tasks do not only require the application of an already known phenomenon or rule in order to facilitate practice, but they also entail organically interlinked information processing and skills development elements, and their solution requires an application-level intellectual move, along with the extra emotional quality entailed by a possibly successful solution. In other words, skills development tasks basically do not contribute to practicing an already known “routine”, but enable students to recognize a new element of knowledge or interrelation.

The content of skills development tasks is not necessarily linked to conventional subject content; rather, it is related to fields of specialization or cross-curricular and special development fields. As a rule, the application of such tasks requires novel methods of learning organization (drama pedagogy, project, etc.) and does not entail summative assessment. In this context, the primary objective is not to offer a successful solution of the task, but to engage in attempts, observation, experimentation and planning, to recognize analogies and to consider alternatives. This means that objectives of application include the acquisition of the language and tools of learning, the further development of thinking, the development of problems solving skills that can be used in everyday life and the function of boosting self-confidence. It is of particular importance to ensure that subject teachers take part in motivating students as actively and diversely as possible and help students recognize the problem situation that is reflected in the task. In the course of

processing or looking for a solution, it is recommended that students should be invited to consider how the problems entailed in the tasks is reflected in the context of the relevant historical period and in the approach of those who solve the task. The former excludes anachronistic solutions, while the latter creates the opportunity to reflect on one's own life (personal involvement).

Skills development tasks may be based on elements of drama pedagogy or novel learning methods, and they may focus on a “code change”, the inductive/deductive/analogy-based modelling of the process of historical cognition or complex problem solutions. The point of tasks based on drama pedagogy is that students enter a specific historical situation and imagine what they would do among the given conditions. Thus, the processing of the material requires not only a higher-level cognitive activity but a certain level of emotional identification as well. This is how knowledge finally becomes personal. The key concepts are *role* and *identification*. The application of drama pedagogy tasks may be linked to deepening the knowledge of the material already acquired, and, in many cases, they are suitable for being the first steps in introducing the features of a historical age or understanding a historical situation still unknown to students (Annex).

A NEW PEDAGOGICAL APPROACH AND TEACHER TRAINING

In recent decades, due to the major changes that have occurred in the general approach to learning, a competence-based, output-focussed teaching paradigm – concentrating on learning outcomes – has become a determining factor. The paradigm shift in the field of the learning process significantly affected the actors of the process, as in the new pedagogical approach (Adam, 2008; Kennedy, 2007) teachers' role changes: from individuals sharing knowledge they become supporters of the learning process. A key point in the changes of teachers' role is that, instead of knowledge transfer, the role to orient, explain, transmit and counterbalance (the role of a facilitator) comes into the fore, to ensure that teaching content and processes becomes more realistic and practical and their processing more experiential. In other words, a gradual change of pedagogical cultures is taking place. In a certain sense, conventional discipline-based knowledge is devalued, while those pedagogical competences are emphasized which “make up the professional knowledge of how teachers can support their students' learning process as effectively as possible.” (Halász, 2007)

Consequently, teachers need to perform well in a new world of education that has features different from those of the previous one. Meanwhile, the increase of the value of knowledge and a more direct link between education and economy call for the efficient work of teachers more markedly than ever. European thought sees

the teacher's profession in a complex manner, as a career path based on continuous development. The phases of a teacher's career form a coherent system based on teachers' competences. In other words, the initial phase of teacher training, the system of in-service training, the regulations on public education, teacher training, employment, accreditation and quality assurance, along with the systems of remuneration, promotion and incentives make up a unified system (Stéger, 2012).

The process of and demand for a shift of pedagogical culture can be identified in the field of teaching history as well, and it reflects (beside the general trends) several specific features as well. One of such features worth emphasizing is the fact that the content, formerly almost exclusively focussing on political history, has undergone a major change, while the history of society, lifestyle and cultural history has come to the fore (Szebenyi, 2012). At the same time, the practice of the study of depth has become more and more accepted. The basic idea of the approach is that it processes a significantly smaller amount of conventional knowledge, yet processing takes place at much greater levels. In addition, curricula and requirements contain more and more content related to the contemporary historical age and the intention to educate students about democracy (Halász – Lannert, 2003), and are augmented with a novel practice that requires activity on the part of the students.

However, the Hungarian setting of teaching history were also influenced by historical factors other than international trends. History identified several political changeovers during Hungary's history in the 20th century. It seems that the process of "political transitions" is still ongoing, which means that the interpretation and re-interpretation of the past is a part of our present" (Romsics, 2002). Consequently, the new ideas of teaching history which appeared in international technical literature and in practice from the 1970s and 1980s onwards had to be and still need to be incorporated among ongoing debates on the historical canon.

Despite such difficulties, several favourable processes have commenced in the field of teaching history. These changes are clearly shown by the official tools of content regulation (NCC, requirements of the secondary school leaving examination). Changes to be highlighted include the competence-focussed approach reflected in documents prescribed by state bodies (e.g. acquiring and processing knowledge; communication; critical thinking), the growth of the importance of content related to the history of the 19th and 20th centuries, and a source-based processing of the study material and assessment (Kaposi, 2010). These changes are clearly reflected by recently published textbooks. This field, however, is marked by a controversial situation, as the market-based choice of textbooks made it possible to ensure (as opposed to the newly defined principles) the dominance of a focus on knowledge, which is evidenced by the fact that in the first half of the 2000s the quantity of data published in the textbooks grew (Kojanitz, 2005).

Experience of the last decade has shown that it was the new type of secondary school leaving examination (a strong output requirement introduced in 2005) that exercised an influence in terms of content and methods right down to the level of classroom processes (Kaposi, 2010). The practice of teaching history is highly differentiated, too. In numerous schools and in the everyday work of some teachers, a process of a major attitudinal change is seen. This holds especially true for the last ten years. As a result, in teachers' work the rate of activities limited to sharing information has decreased, while the rate of teaching practices focussed on sources and activities, coupled with novel interactive methods of learning organization (e.g. projects, activities in pairs, drama pedagogy) has increased (Kaposi, 2010). Obviously, the shift of pedagogical culture discussed above has not been fully applied in everyday teaching practice yet. This means that, as evidenced by recent surveys, the dominant method used in classrooms remains frontal instruction where teachers dictate and students record information. Data show that there is a difference of more than 44 percentage points between an enjoyable, awareness-raising and motivating way of teaching (as demanded by students) and the actual everyday classroom practice (Sági, 2015).

In an attempt to identify the reasons for the controversies that are detected in the system-level renewal of content and methodology required in public education, reference needs to be made to the role of Hungarian higher education. With regard to the training of teachers of history, it is probable that conventional university education and system of subjects were not prepared for a situation where the National Core Curriculum – during the relevant debates in the 1990s and onwards – reflected the demand for a training which focuses on complex competences of social science and a general learning competence and which is based on fields of specialization and requirements of development. Basically, the new approach of NCC ignored the traditional department structures of the universities (a factor that defined the content-related framework of teaching) and the general and specific competences of subject teachers. To some extent, the way universities responded to new content and methods was due to the fact that in the same period they faced the challenges of a complex extension (of degree courses and the number of students), institutional integration and the change of quality attributable to massification and to the introduction of the two-cycle university education. The processes were – and are – hindered by the fact that, in general, that the didactics of teaching history is a factor that is not prioritized properly in higher education. This is evidenced, among others, by the fact that at some universities this field forms a part of a discipline-related preparatory phase, while at others it belongs to pedagogical training (F. Dárdai, 2010).

On the other hand, numerous favourable processes are detected in teacher training. For example, in training and exit requirements (in 2008 and 2013 alike) new

elements were introduced that are required for a content-related and methodological change that falls in line with the current processes in public education. Moreover, several institutions of higher education accredited degree courses that give the qualification “teacher of ethics and anthropology” and where students prepare for teaching not only history, but also social and contemporary studies and ethics.

In this field, there is still work to be done. A survey of 2015 (Gál, 2015), focussed on the field of training of teachers of history and performed for ten institutions of higher education, examined to what extent the courses offered in higher education cover the development fields (educational goals, and the contents and requirements of the fields of specialization) specified in the National Core Curriculum. The research shed light, among others, on the fact that almost none of the higher education programmes contain elements of raising media awareness, developing a financial or economic culture or introducing the world of employment as obligatory elements, in spite of the fact that these contents are a part of the framework curricula of grades 5–8 and 9–12 alike.

The fact that these subjects offered by bachelor programmes of teacher training means that, as of now, the abilities required for teaching the new contents specified in the NCC and in framework curricula need to be acquired within the framework of the in-service training of teachers; all the more so as teaching such content requires competences and learning organization methods that differ from those used in teaching history (e.g. sociology and civic studies). Unfortunately, the gaps in preparation can be filled in only partially by the system of counselling and subject supervision (currently being built up), as in the training programme of counsellors and subject supervisors the share of subject-level knowledge is relatively low (out of the 45 contact hours, only 8 are dedicated to the purpose) and the new fields are hardly reflected in the documents of training (SROP 3.1.5, 2014). It is to be hoped that, at a later point, general counselling competences become routinely used and, thus, the novel and interactive activities of teachers of history will be made widely known within the framework of the system of subject-related counselling.

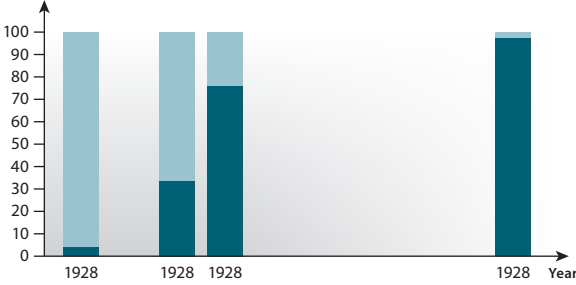
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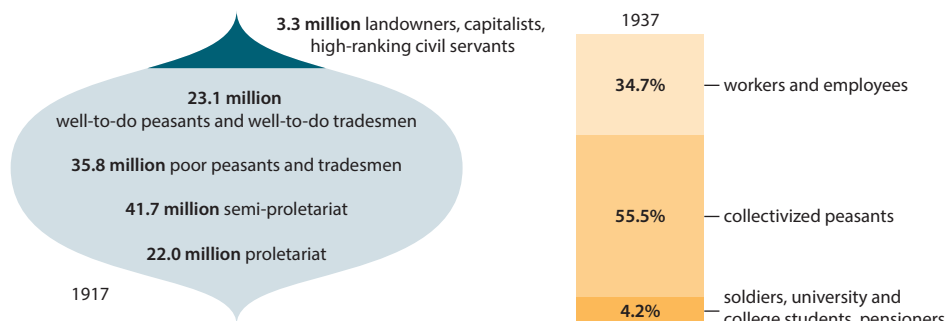
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ANNEX

The “Soviet miracle”	Grade 12																																																				
<ul style="list-style-type: none"> ▪ Goal ~ The students should be able to apply their skills to gather information from a variety of sources as a routine, and should recognize the characteristics, advantages and drawbacks of the comparative method. Another goal of the task is to enable students to interpret and evaluate a historical process in a comprehensive fashion, and to prepare them for the data collection and structuring required for essay writing. 																																																					
<ul style="list-style-type: none"> ▪ Organisation ~ Tools required: paper and pen. 	Work form and time: pair work ~ The first part of the task plus report: about 10 minutes, the second part of the task plus report: 5 minutes each, the third part: 5 minutes each. conclusion about 2 minutes.																																																				
<ul style="list-style-type: none"> ▪ Document <p><i>Source 1</i></p> <p>“Those who don’t stride with big steps will be left behind. Those who are left behind are doomed to failure. We don’t want to be vanquished. No! We don’t want that. [...] Let me remind you of the poet’s words before the Revolution: ‘You are poor, Mother Russia, yet you are full of plenty. You are a giant, yet powerless, Mother Russia.’ [...] We are trailing fifty, a hundred years behind the developed peoples of the Earth. We must make up for this in ten years. Either we manage to make up for our delay or we will be shattered to pieces.” (<i>Stalin’s speech in 1931</i>)</p> <p>“...over them all, in 1929-1930, billowed and gushed the multimillion wave of dispossessed kulaks. It was the forced resettlement of a whole people, an ethnic catastrophe [...] no one fussed about with taking the head of the family first and then working out what to do with the rest of the family. On the contrary, in this wave they burned out whole nests, whole families, from the start [...] to the last scrapings, all had to go down the same road, to the same common destruction.” (<i>Aleksandr Solzhenitsyn: The Gulag Archipelago 1919–1945. In Hungarian: Európa Könyvkiadó, Budapest, 1993, pp. 72–73</i>)</p> <p><i>Source 2</i></p> <table border="1" data-bbox="148 1093 728 1243"> <thead> <tr> <th></th> <th>1913</th> <th>1917</th> <th>1928</th> <th>1932</th> <th>1937</th> </tr> </thead> <tbody> <tr> <td>Coal (mn tons)</td> <td>29.1</td> <td>31.3</td> <td>35.5</td> <td>64.4</td> <td>128.0</td> </tr> <tr> <td>Steel (mn tons)</td> <td>4.2</td> <td>3.1</td> <td>4.3</td> <td>5.9</td> <td>17.7</td> </tr> <tr> <td>Electric energy (bn kW)</td> <td>1.9</td> <td>2.6</td> <td>5.0</td> <td>13.5</td> <td>36.2</td> </tr> </tbody> </table> <table border="1" data-bbox="774 1093 1102 1243"> <thead> <tr> <th></th> <th>1913</th> <th>1940</th> </tr> </thead> <tbody> <tr> <td>Iron (mn tons)</td> <td>4.2</td> <td>14.9</td> </tr> <tr> <td>Steel (mn tons)</td> <td>4.3</td> <td>18.3</td> </tr> <tr> <td>Rolled sheet (mn tons)</td> <td>3.5</td> <td>13.1</td> </tr> </tbody> </table> <p><i>Source 3</i></p>  <table border="1" data-bbox="774 1323 1102 1472"> <thead> <tr> <th colspan="4">Type of settlement and number of inhabitants</th> </tr> <tr> <th></th> <th>1913</th> <th>1939</th> <th>1959</th> </tr> </thead> <tbody> <tr> <td>Village</td> <td>130</td> <td>130</td> <td>110</td> </tr> <tr> <td>Town</td> <td>30</td> <td>60</td> <td>100</td> </tr> </tbody> </table> <p>Proportion of collectivized peasant farms (%)</p>			1913	1917	1928	1932	1937	Coal (mn tons)	29.1	31.3	35.5	64.4	128.0	Steel (mn tons)	4.2	3.1	4.3	5.9	17.7	Electric energy (bn kW)	1.9	2.6	5.0	13.5	36.2		1913	1940	Iron (mn tons)	4.2	14.9	Steel (mn tons)	4.3	18.3	Rolled sheet (mn tons)	3.5	13.1	Type of settlement and number of inhabitants					1913	1939	1959	Village	130	130	110	Town	30	60	100
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Source 4



Source 5

“In accordance with the changes that have taken place in the Soviet economy the class breakdown of our society has also changed. As it is commonly known, the landed class had been liquidated with the victorious ending of the Civil War. As for the other exploiters, they shared the fate of landowners. The capitalist class has disappeared from agriculture. Gone are the traders and speculators from turnover of goods. We thus have eradicated the exploiter classes. But we have the working class. We have the peasants’ class. As well as the intelligentsia. However, it would be a mistake to think that these societal groups have not changed over time [...]” (*Stalin’s analysis in 1936*)

Preparation stage	Motivation In the Soviet Union changes of a tremendous scale took place in social and economic life from the mid-1920s until the end of the 1930s. It could be argued that these changes reformed the Russia image of the Bolshevik dictatorship. This process occurred by the application of different forms of violence. Examine the process. Explore in which areas violence was manifested and by what means. Evaluate the changes that resulted.			
	Task stages	Tasks	Operations (understanding, processing and carrying out instructions)	Competences
Pair work				
Solution state	Task 1 Based on the sources related to the groups, formulate five statements each consisting of a finding and an explanation.	Systematization <i>Finding the key information in the text. Understanding; finding analogies.</i>		Personal competences – Decision making ability
	Source	Fact recognized	Explanation	
	1			
	2			
	3			
	4			
5				

	<p>Task 2</p> <p>Based on the sources and the solution of Task 1 write a summary, in two or three sentences, of the goals, ways and results of the social and economic transformation in the Soviet Union.</p>	<p>Application</p> <p>Supporting the statement by examples</p> <p><i>Formulation of conclusions supported by reasoned arguments.</i></p>	<p>Personal competences</p> <p>– Problem solving skills</p>
	<p>Summary:</p> <p>.....</p> <p>.....</p> <p>.....</p>		
	<p>Task 3</p> <p>Write an evaluation, in two or three sentences, of the social and economic processes that took place, based on facts.</p>	<p>Evaluation</p> <p><i>Comparison, text formulation</i></p>	<p>Methodology: application of the network of analogic and transfer thinking.</p>
	<p>Evaluation:</p> <p>.....</p> <p>.....</p> <p>.....</p>		
Presentation			
<p>Follow-up stage</p>	<p>At home prepare posters about the Soviet miracle from opposite perspectives. Follow the style of the period. Groups 2 and 3 should emphasize the positive aspects of changes, and Groups 1, 4 and 5 should focus on the negative aspects.</p>	<p>Understanding and presenting historical and moral contents.</p>	<p>Interpretation of sources and descriptions/reports. Methodology: application of comparative skills.</p>

ANDREA PALLAG

Complex Art Education in the Primary School – Experiences of a Programme Development Project

DEVELOPMENT FRAMEWORK

Between 2012 and 2015 the Hungarian Institute for Educational Research and Development (HIERD) developed educational programmes in order to support professional work in all-day schools and help the effective extracurricular development of primary school students by providing concrete programme descriptions in, inter alia, complex art education which draws on multiple branches and forms of art.

The purpose of all-day schools is to supplement classroom development activities regulated by central curricula with school-based accessible purpose-designed extracurricular activities with a view to promote equal opportunities. As opposed to half-day teaching the efficiency of this type of education organisation stems from the fact that the development process offering a variety of activities and a more balanced rhythm, is construed for the entire period of the daily school schedule. Consequently, it is less of a burden on the students, and the time spent at school can be better suited to students' individual needs. As a result, the chances for successful learning increase. This approach conceives of all-day school as a flexibly operating community and social medium that provides a unified framework of children's daily activities by also undertaking other tasks apart from teaching.

These system-level development goals were supported by innovative research and development activities. Applying different research techniques they laid the theoretical foundations of the programs' concepts and feasibility, and involved pilot schools thereby linking theory to practice.

Andrea Pallag: *Complex Art Education in the Primary School – Experiences of a Programme Development Project* In: Fehérvári, A. (ed): Curriculum, Effectiveness, Equity. HIERD: Budapest pp. 23–33.

Two important components of the R&D implemented jointly with the schools were the development of the educational programme, and the documented piloting of its teaching units. The educational programme is a tool supporting schools' planning and organisation by presenting the planning and organisational elements related to a particular pedagogical concept in great detail. Monitoring and full-fledged documentation, useful for further research, were important characteristics of piloting, which was closely linked to development as the precondition for a successful further development of the programme was the reflexive analysis of the implementation experience. Utilisation of the experience of the pilot not only had a positive bearing on the outcomes of the project but also had a direct impact on the educational work in the schools involved.

FOUNDATION RESEARCH

RESEARCH FRAMEWORK

In system-level development it is particularly important to deploy research based on empirical facts that can shed light on the causal relationships of development and as such, can signal and reflect changes if any. Accordingly, in order to register the changes resulting from the development project impact assessment and suitability verification were conducted as part of the process.

The impact analysis accompanying the development project was carried out in three stages. The 'before' analysis took place prior to development. The goal was to explore the development environment at the outset and to estimate the impacts of the development. At this stage two lines preparing the impact analysis were followed. One line was the situational analysis, relying on different qualitative methods, of complex art education. The other was the exploration of the nine pilot institutions participating in the programme to find out about the attitudes and motivation of the development teachers and to map the attitude and certain skills of the students at the input stage. The interim analysis assessed the mid-term experiences of the pilot programme. An important feature of this stage was that it was conducted in the medium where the programme was to be implemented, thus there was a good chance to rely on the knowledge of stakeholders and directly incorporate the findings of participatory action research into the development process. The 'after' analysis gave rise to the final conclusions that could have an additional influence on the outcome of the programme. In the input and output stages a questionnaire-based survey was conducted to assess the direct impact of the programme on students.

As the research goal was to develop a complex art education programme acceptable for schools it was crucial to precisely interpret complex development

opportunities and to identify the conditions of their implementation in the school. To this end, prior to the programme the researchers formulated concrete questions about the interpretation of complex art education, its developmental impact and implementation in the formal school setting, for example in the form of extracurricular activity in all-day schools (Pallag, 2014). These questions are particularly worth examining in the light of the fact that neither the integrated teaching of several disciplines (subjects) nor complex developmental goals reaching beyond the system of school subjects is generally accepted in Hungarian school-based education.

INTERPRETATION OF THE CONCEPT OF COMPLEX ART EDUCATION BY MEANS OF VARIOUS RESEARCH TOOLS

The research started with exploration of the literature available about current practices of complex art education. Then, based on the information the Delphi method was applied to determine the possible developmental effects or success criteria of complex art education. In addition, to refine the concept of complex art education, a concept map was drawn up to explore the ideas about complex art education of the teachers involved.

Combing through the Hungarian and international practices, curricular and extracurricular complex art education programmes were mapped. Attention was paid to interpretations of the concept of complexity, the levels of appearance of the complexity elements and the coherences they carry. Studying the literature gave rise to three groups of complex art education (Skrapits, 2014).

The first group comprises programmes that handle complexity as the manifestation of art focusing on the connectivity and transferability of activities in the various forms of art (e.g. music, plastic art, dance, literature) in order to strengthen artistic expression. The second group contains programmes that exploit the goals and opportunities of familiarization with art and science together in order to promote the cognition of reality in the course of learning. The main goal of this concept is to seek objective reality, and through this pursuit to create a world image which may be uniform. An important way to this is through exploring the interrelationships between the two areas. As a cross-section of these two directions, the third group puts into focus development by complex means. This theory proposes to practise creative activities based on contents which stem from complex and realistic problems, the main goal being to develop an open personality that is able to get to know the world and to live in it in harmony with itself and with others (Pallag, 2014).

No matter which line of theory is examined in terms of their implementations, their common feature is to strive at unity and wholeness. Thus the analysis of current practices gives rise to an important lesson: just as it is an essential feature of complex systems to create from the system's elements a new whole with an autonomous structure, so is creating a new impact resulting from multifarious and strongly interrelated activities an important condition for complex art education – an impact with a new quality that is different from the individual developmental results of the activities of which it is composed (Complex art education programme, 2014).

The findings of the literature analysis promoted the application of another qualitative research technique, the so-called Delphi method. Essentially, this method consists of the analysis and summation of expert opinions in a particular field in multiple superimposed stages to arrive at a consensus about the researched problem based on the knowledge and opinion of the broadest possible group of experts.

According to the findings of the Delphi research extracurricular complex art education can only be successful if art is present in the process as the tool of development and exerts its multifaceted developmental effect through giving ground to practise self-expression which also plays a communicative and mental role and, as such, affects the entire personality. In this way, the goal of art is not only to enhance aesthetic sensitivity but also to develop creativity. Methodologically it is successful if based on plays and practical activities, and accommodates individual differences and thus enhances the motivation to learning. The teacher's person is another important condition for success: the teacher must be professionally well-equipped, open, dedicated, and prepared for innovation. The criteria for success determined by the Delphi method can be conceived of as the basic concept of the complex art education programme.

The results of Delphi were supplemented by concept mapping conducted among the teachers involved in the programme. The aim was to either support or refute the findings of Delphi, and to determine the dominant elements of complex art education that can also be defined methodologically.

Concept mapping is a method that can be used for the description of ideas within the sphere of association of some topic in a pictorial form. The visual representation of the relationship and links between the ideas provide additional information about the meaning of the original topic or concept examined.

The teachers involved used a multitude of different ideas to describe the concept of complex art education. While the diversity of ideas was typical, the most important and universally accepted characteristics could be singled out on the basis of frequency, semantic groups, and central appearance. They include attributes that affect the putative development outcome, which are the same as those emerging as a

result of the Delphi analysis (e.g. development of self-expression and creativity), and there are attributes concerning the methodology of activities that are paramount for complex development (e.g. playfulness, cooperation and openness).

Thus there was a correlation between the results of the attributes and developmental impacts of complex art education investigated by the Delphi method and by concept mapping despite the fact that due to their nature the two research methods approached the concept of complex art education differently. While the Delphi method, relying on the literature, starts out from a more closed usage of ideas on the basis of the common denominator of diverse and rather numerous opinions when examining a topic, concept mapping examines the same topic relying on free association, from the personal perspective of practising teachers who interpret the development process on the micro level. Although the starting point of the two analyses is different they have a lot in common in terms of their results. So the findings of our research about the description and possible successful implementation of complex art education depict a complex art education concept whose main goal is to ensure an inspirational school environment that applies complexity as a tool in developing the personality observing the world in an open way, in harmony with itself and its relationships – a goal achieved through practising various forms of artistic self-expression.

THE CONCEPT OF COMPLEX ART EDUCATION

The special goal of this programme is to promote the development of the healthy personality, successful in forming relationships, by practising creative activities in various fields of arts in the interest of complex developmental aims. The extracurricular programme supports the requirements of the curricular art subjects but because of its essential complexity these requirements do not coincide and the extracurricular programme is not merely an integrative vehicle (Complex art education programme, 2014). According to this developmental concept, and relying on the findings of the analyses described above, complex art education could be an effective tool in schools for strengthening, primarily, social competence including social relations. This is achieved by skills and competence development through multifaceted playful activities, for instance movement, speech, music, visual representation, etc. with the important aim of encouraging self-expression and communication. As these activities make their impact through aesthetic impressions they are eminently suitable for developing aesthetic sensibility and creativity (Pallag, 2014).

In the pedagogical concept a comprehensive definition of social competence was applied. Accordingly, social competence is seen as the sum total of social skills

which enable the individual to achieve their goals in various social interactions by considering possible solutions and to the satisfaction of others – in other words, the sum total of the manifestations of the individual’s successful socialisation and successful functioning in a community (Zsolnai, 1994).

By practising various forms of artistic expression the priority goal is to develop skills related to the expression, understanding, recognition and control of personal feelings which also play a role in social behaviour. At the same time, emotional processes are closely linked to thought processes, therefore social competence development should not neglect the cognitive components either (Zsolnai, 2008). Accordingly, the basis of the complex approach rests on three pillars required for social competence development: personal and social skills development, and development of the cognitive skills supporting the functioning of both of the other sets of skills.

OUTCOMES OF THE NEWLY DEVELOPED PROGRAMME

To verify the concept of the complex art education programme the principal aim of the impact analysis was to explore the effect of the pilot project on the development of the individual students and student groups, and on the attitude of teachers involved. This was done by means of ‘before’ and ‘after’ tests. The input test was conducted by means of questionnaires before the pilot, and the output test was conducted after the conclusion of the school programme.

STUDENT RELATED FINDINGS

The student questionnaire had questions in four dimensions. Self-image included questions relating to self-confidence and self-evaluation; social competence included questions related to social aptitude, mainly cooperation, peer relations in class, and social relations; questions exploring students’ empathy; and motivation to learning. The results were measured (before-after) by means of paired sample T-test with a control population. According to the paired sample T-test technique the change of every student involved in the pilot program was compared to the development of another student whose parameters were similar but who did not participate in the pilot (they comprised the control group). The impact of the development is the difference between the average development of the participants and the control population, taking into account the inevitable distortions arising from the differences between the groups (Kalocsai, 2014).

The input and output populations consisted of 714 and 753 students respectively and included 398 and 428 respective pilot students. The higher numbers at the output stage were due to absent students at the time of the input test, and also to the fact that new students were involved in the later stage of the programme. Forty-seven percent of the students were boys and 53% were girls. As regards other parameters, the only significant difference between the sample and the control population was in respect of scholastic achievement and keenness to go to school. The scholastic achievement – and possibly consequently the keenness to go to school – of students participating in the pilot programme was already better at the input stage compared to the control group (Kalocsai, 2014).

Examining the changes of the specific factors in the contexts of the pilot group and the control group, there is a significant difference between the input and output test results as well as between the pilot group and the control group in terms of social competence, and, in particular, in empathy. By the end of the development project the dimension of social skills of students in the pilot group was up from an average of 3.05 to 3.28, and the empathy indicator in the pilot group increased from an average of 2.9 to 3.14; this means that in the investigated period the empathy and other social skills of the pilot group students improved as a result of the development (Kalocsai, 2014).

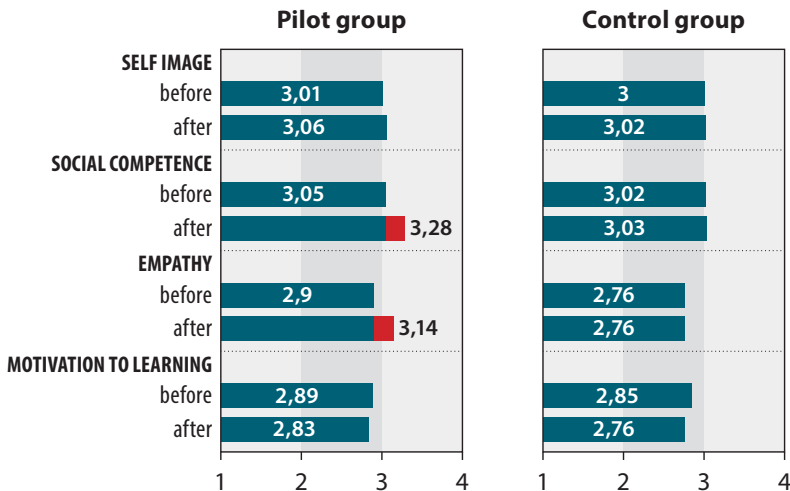


Figure 1 | Results of the pilot and control groups by developmental goals in the input and output tests (on a scale of 1–5, averages)

On the whole, there was no significant difference between the before-after tests and the pilot and control groups in respect of self-image and motivation to learning. Nevertheless, examining the results by grade there was a significant improvement

in the self-image dimension of the younger generation (grade 3) in the pilot group compared to the control students. Therefore the test results indicate that in the case of the younger generation the programme's developmental power was measurable not only in the field of social and empathic competences but it also brought about a positive change in self-image.

At the end of the project the students were asked about their feelings about the programme. From the students participating in the pilot 88% liked the modular sessions they tried during the complex art education programme and 85% thought the programme was interesting. So the majority of students liked the activities and not only did they have a good time but they also found the programme useful as in their opinion the activities helped them to get to know themselves and their peers better, and learning was also easier (Kalocsai, 2014).

TEACHER RELATED FINDINGS

The teachers' questionnaire at the input stage mapped the preliminary expectations and attitudes of teachers. The output questionnaire was designed to find out about their attitudinal changes and impacts as a result of the programme. Teachers' attitudes were explored by means of their agreement or disagreement with a series of statements related to art education. The teachers were invited to evaluate the programme based on its impact on students' scholastic achievement, teachers' performance, students' social and cognitive development, teacher-student relationship, students' keenness to go to school, and finally, the impact on the school atmosphere as a whole.

The input and output questionnaires were filled by 34 teachers participating in the complex art education programme. Of them, 85% were female and 15% male. Among those who gave substantive answers 32% teach in grades 1–4, 15% in grades 5–8 and 53% in both lower and upper grades. The teachers involved have relatively significant teaching experience: 59% have had a teaching career for over twenty years (Kalocsai, 2014).

The teachers had rather high expectations already at the outset as regards all the investigated dimensions of complex art education. The strongest positive change was expected to appear in cognitive skills, for instance concentration and problem solving, and also in personal and social competences, for instance self-esteem and cooperation. Expectations for a positive change were also high in respect of teachers' own professional work. The lowest expectation concerned the dimensions about the wider impact of the programme, for example general atmosphere in the school and students' keenness on school. The average results of the input and output tests do not display a significant difference: teachers' expectations were not too different

from the outcome. This means the programme delivered the results expected by teachers (Kalocsai, 2014).

After the evaluation of the statements the teachers were asked to also assess their direct experiences acquired in the course of the complex art education programme. The following figure illustrates the basic distribution and averages of the input and output evaluation of module writing and testing, collaboration with teachers from other schools, the role of external assessors, reflection on their own work, and consultations during the module writing work.

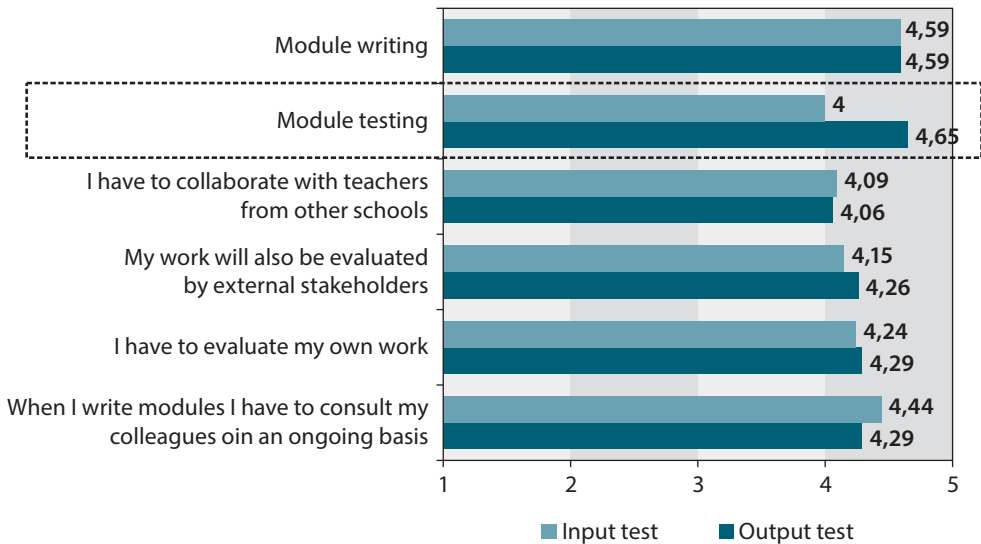


Figure 2 | Impact of the development activity on teachers' work (on a scale of 1-5, N=34, average)

Teachers rated the programme development activities positively both before and after the project; i.e. they had positive expectations right from the beginning as regards the specific components of the development, and this assessment did not change significantly by the end of the project.

Looking at the answers to the specific components of the programme in their totality, it is conspicuous that the only significant difference between the input and output test results is in the module testing dimension: at the beginning teachers attributed less importance to the testing of modules developed during the programme than after the pilot was concluded. It transpires from the more elaborate answers that one of the most important reasons of the more positive evaluation of module testing at the output stage is a closer and deeper teacher-student relationship that emerged in the course of testing.

Categorising the answers given to open-ended questions reveals that teachers' main expectation of the development was to enhance motivation and to expand the set of teaching tools. The challenge inherent in the developmental task was also important for them. Several teachers mentioned the opportunity for self-reflection and new experience. Teachers indicated deeper and closer teacher-student relationship and getting to know each other better to be the biggest capital return of the development. The opinions also contained learning and trying out new teaching methods, professional challenge, and positive feedback from students whilst testing the modules (Kalocsai, 2014).

SUMMARY

Based on the findings of the research and development, extracurricular complex art education can be implemented in the context of schools following the traditional structure of subjects, with demonstrably positive developmental results. According to the concept, in the framework of a coherently organized all-day school the complex art programme puts emphasis on the development of social competence through practicing artistic self-expression. The findings of the impact analysis revealed a positive change in some of the social skills of the students participating in the pilot programme, for instance cooperation, empathy, and in the case of younger students, also self-evaluation. Therefore the findings seem to verify the main developmental goals of the concept; moreover, other positive effects on teaching and learning were also apparent. It can thus be concluded that in the complex structure of a purposefully designed all-day school the transfer effects of extracurricular activities, such as, for example, complex art education promote the multifarious tasks of school development particularly in the four lower grades. Supported by a pilot, the development project also highlighted the fact that a novel way of thinking and a methodological challenge has a positive impact on teachers' attitude to teaching and learning. The complex art education programme had a conspicuous effect on teachers' day-to-day work which showed directly in the improvement and deepening of teacher-student relationship; this in turn may have an indirect positive effect on educational effectiveness.

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MÓNIKA RÉTI

Soft Systems Methodology as a Support Tool for Creating a Complex Science Education Programme for All-day Schools

RESEARCH CONTEXT

This research was part of an overarching RDI programme developing curricula, mentoring and training for ameliorating the public education in Hungary including support for professional learning, improving info-communication and quality management at a national level. The programme was co-financed by the European Union within the Social Renewal Operational Programme (TÁMOP 3.1.1). One thread of this programme offered support for the so-called all-day schools: these are primary and lower secondary schools which offer learning activities for students throughout the day. This organisational form is new in Hungary, but introducing envisioned high expectations for combating inequities and for renewing pedagogical culture in these institutions. Amongst others, a complex science education programme was developed between 2012 and 2015. This programme offers modular elements for extracurricular school activities as well as a support system for their implementation (Fig. 1.).

The pedagogical concept of the science education programme for all-day schools built on two pillars: besides active learning, the reflective practice was highlighted, which was meant to provide means to implement elements emphasized in major national and European policy recommendations and steering documents to improve scientific literacy and to establish an efficient operation for all-day schools in daily practice. Furthermore, reflective practice serves as a basis for teachers' professional learning (Day, 1999). It is through professional learning that teachers can gain the didactic and methodological toolkit and pedagogical process knowledge, which

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allow them to successfully adapt the modules of the science education programme (Smith et al, 2013).

Based on the pedagogical concept, other elements of the complex programme were prepared including the teaching-learning programme, which elaborates the didactic and pedagogical approaches recommended to adapt the modular units of the programme, the assessment system (including principles, assessment schemes and guidelines for applying the programme elements and implementing the programme at school level, and advice on evaluating pedagogical efforts). Tools are included in module descriptions. There was an accredited professional development programme also piloted with 30 in-service teachers added to the programme. The mentoring system provides materials which proved to be efficient in partner schools in the pilot phase.

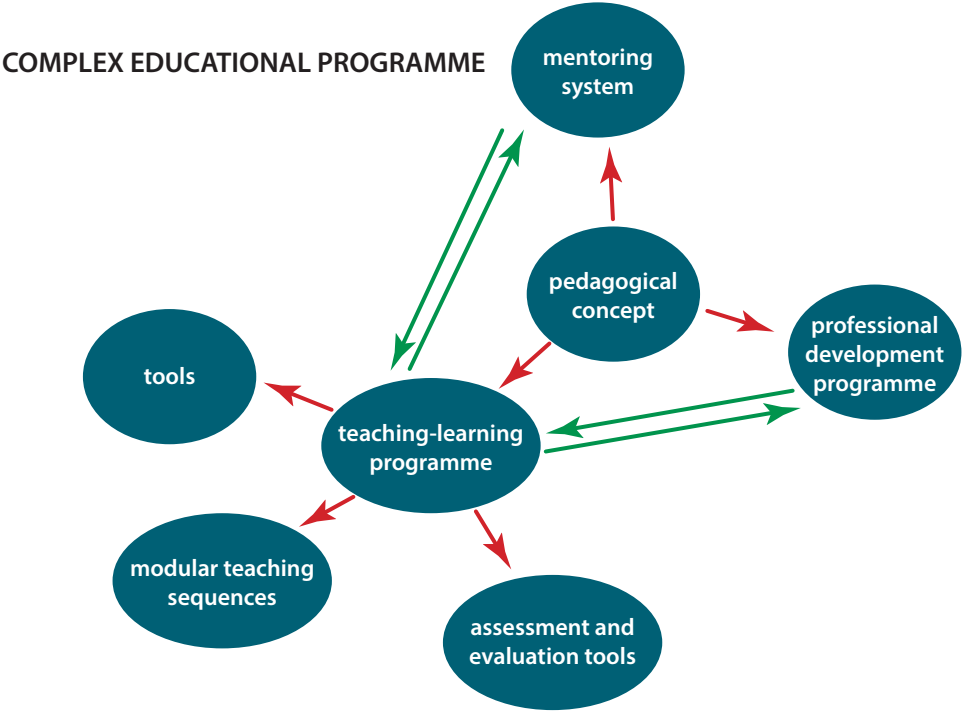


Figure 1 | The elements of the complex educational programme

The Hungarian Institute for Educational Research and Development as a project leader invited eight partner schools to collaborate in the programme development: their major tasks included preparing and piloting with modules (including adaptation of those prepared by other schools), and providing structured reflections to other elements of the complex programme. Teachers contributed to

research activities and took part in the professional development programme too. The science education team members (in collaboration with teachers) observed 97 lessons using participatory action research, and also collected data with semi-structured and deep interviews and questionnaires to learn about how students and teachers perceived the relevance of science and the school science activities, in cases also augmented by photos and videos from school lessons. Some 250 experts were involved in the programme development at various phases, including an advisory board, a preliminary Delphi research (establishing success criteria for the programme) and at workshops along the mutual learning journey.

This paper focuses on the process of the programme development and the main lessons learnt along the way: it introduces how soft systems methodology was applied as a possible tool for collaborative development of educational programmes – and approach so far new in similar programmes in Hungary.

THE AIM OF THE RESEARCH

In the preparation of the complex science education programme, elements of curriculum design could be observed. The aim of the soft systems methodology research was to guide the development process in a way that the individual observations could allow researchers to conclude statements relevant for the entire system of public education: which is assumed to be one crucial criterion for creating a national educational programme. The soft systems methodology therefore also served as a tool for evolving the programme, with the modification of including participatory action research as a reflection tool, in modelling and in analysing intervention routes.

The research was a methodology experiment for the team to better understand how this qualitative research tool can be applied in educational content development efforts.

BASICS OF SSM

Soft systems methodology (SSM) is based on the paradigm that the researcher needs to be a part of the practice (Checkland, 1972), joining and sharing the processes to which SSM is applied. The task of the researcher is to understand the related processes and to “enjoy them” (Checkland, Poulter, 2006).

Earlier systems theories encountered the target of searching for clear approaches, in which after determining needs they designed a system responding to the needs (and hence solving the problems). As opposed to these, SSM (emerging from research

in technology) offers a complex approach, which displays directions for development through a more profound understanding of the problem. The SSM paradigm has proved to be efficient in managing multi-stakeholder, multiple feedback and flexible processes as well as in change management connected to complex development.

The term *soft* in SSM refers to the vital quality that this approach does not seek to structure the initial situation by interventions (or research): instead, inquiries and activities based on those serve to make further research more and more structured. More structured inquiries lead to more purposeful (more successful, more efficient or more effective) solutions. Continuous development (or incessant change) as the principle of SSM should be underlined though in this sense, SSM does not aim to establish a “terminal solution”, rather, it intends to identify sustainable and desirable solutions, which are suitable for further refining and the unceasing refinement of which shape the initial situation.

The methodology applied to the teaching-learning process states the following. One possible solution is to pre-determining pedagogical goals and development tasks, and then to design a curriculum. In this case the curriculum will fail to consider the cultural diversity of users and the systems dynamics of implementation. The curriculum itself (which possibly has a deficit perspective) will only solve the initial problem if each case (including all possible constellations of classrooms, student groups and teachers) exactly corresponds to the originally supposed circumstances, and the deficits in knowledge-skills-capacities also exactly match the challenges to which the development tasks respond. If these parallels are not exactly the same, the implementation of the curriculum require further interventions, and even provided those, it might occur that the culture of a specific environment will hardly allow the operation of the curriculum. Therefore in a process in which the curriculum can be agile enough to contain the practical approaches by which it can be tailored to local needs, the implementation of the curriculum requires less effort. In this context, SSM as a framework offers an approach (by revealing relevant practice) to identify a model, which makes diversity manageable.

This approach is summarized in Figure 2. In this case, the real problematic situation was the necessity of the extracurricular science education programme. The “purposeful” interventions include good practices explored in the system as well as didactic approaches attainable by teachers. The result of change is a flexible, well-adaptable system of modular teaching-learning units, which is supported by other programme elements, creating a holistic framework for adaptation (the pedagogical concept, the assessment system as well as mentoring and professional learning), offering solutions for filling the extracurricular time frame with meaningful science education activities.

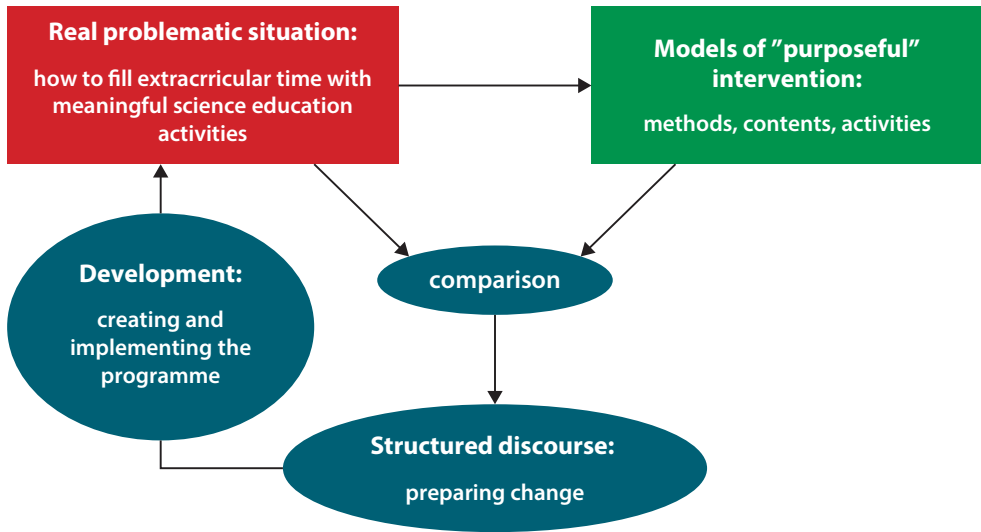


Figure 2 | Soft systems methodology as applied for preparing the complex science education programme

SSM offers an action-oriented, structured way of managing dynamic problem situations, which leads to the unfolding of the development process through research and inquiries in connected iterative cycles. The term problematic situation as preferred to use in SSM refers to the initial situation in its complexity, in which many involved parties take actions to intervene with the intention of practical and meaningful solutions – but the initial situation is not a problem waiting for a single solution to transform it. Instead, due to continuous interventions from stakeholders, the initial situation is in a state of constant changes: thus the “problem” keeps transmuting. Therefore SSM intends to identify intervention routes that move the constantly transforming problem towards a desired change. The methodology offers structured ways and tools to detect the transformation and to follow the process. These are the characteristics that distinguish SSM from any reflective trials, and which make it a more established, scientifically describable and reliable method.

During SSM the researcher facilitates the learning process of the groups which construct the system, while reflecting on the group and process dynamics, the direction of development and the whole process itself.

The SSM method consist of the following (non-linear) steps, which form multiple, linked iterative cycles:

1. Revealing the problematic situation and determining possible interventions, including influential factors, and the cultural¹ and political² aspects of the problematic situation.
2. Determining relevant actions and intervention, and then establishing action models based on these.
3. Posing and testing questions against the problematic situation, based on the model: detecting changes and revealing development directions.
4. Establishing (in the cultural and political context of the problematic situation) desirable and feasible development directions and possible interventions. As all these will result in changing the initial problematic situation, applying SSM can be at most suspended or deferred at a certain point, but the process will not arrive at a terminus, as at this “final” point, the complete iterative cycle recommences.

The algorithm of the methodology is shown in Figure 3, which also highlights iterations. Here we must emphasise that the “purposefulness” of the interventions can only be regarded as such from certain relevant points of views. Therefore these actions always remain relatively purposeful, as they seem only relevant in the context of the initial problematic situation, but as they effect that, the revision of their purposefulness is needed.

The core of SSM logics is the concept of problematic situation. The “situation” in real cases is a rather sophisticated concept, which cannot be restricted to

¹ Culture in SSM literature refers to various factors that influence or determine the relations, the actions or activities and the intentions of stakeholders and actors in a specific problematic situation. In this case, a significant element of the culture were besides the organisational culture of the school the ways that teachers structure and design their teaching, how (and if) teachers apply pedagogical aims, and within that the hierarchy of objectives, how (and if) they link indicators or milestones to objectives (if they formulate a need for measures and assessment or any kind of reflection), or what they observe from their activities and how, etc..

² Politics in SSM refer to the interconnectedness and the system of power relations that determine how the activities, relations and intentions of different groups emerge during the changes in the problematic situation. It is a known phenomenon that changes in the problematic situation result in changes in politics as meant in SSM. In our case, for instance, introducing collaborative work and open-ended inquiry tasks in school communities in many cases resulted in the appearance of typically network or horizontal knowledge management system, which effected the student-teacher relations as well as group dynamics and the organisational culture. As a result of this, student autonomy became stronger (and more accepted or appreciated) and teachers (not only those who participated in the pilot, applying open inquiry, but also their colleagues!) had more confidence to invite and include students to decision-making situations or to share responsibility with them.

describing a number of units. In this sense, it can be stated that participatory action research in this science education project seized certain situations, and the meta-reflection on these situations (leading to better understanding the problematic situation) drove the development process closer to identifying relevant intervention patterns (including pedagogical approaches, didactics, contents and assessment forms), enabling the team to steer these towards a joint development. The complex educational programme resembles of softs systems from the aspect that individual situations (and change patterns fostered by their actions and interventions) interact in a way that the system shows new characteristics due to that. On the one hand, the pedagogical system, establishing pedagogical aims and a learning environment is composed from system elements, which are manifested in the totality of modules and their application (described in the teaching-learning programme). On the other hand, the effect of the implemented programme can be measured based on individual effects and the interaction of (individual, classroom, school level) experiences at a regional or even national level.

The following chapter abridges the most relevant results of the SSM research in the development of the science education programme, organised in the SSM logics. These results primarily focus on the development process: where relevant, also referring to lessons learnt from iterative cycles. In all cases, it is treated as an inevitable fact that (as desired by the applied methodology) main points had been revisited several times, and processes had been reshaped based on reflections from iterations.

RESULTS

Most research activities during the project were embedded in the development, and interlinked with the RDI framework of the whole programme. As a result of these, a number of publications came out, but the most relevant product was the complex science education programme.

THE PROBLEMATIC SITUATION

There was a determined intention while preparing the complex science education programme to create a future-leading approach, in other words, beyond responding to the most burning questions of the present state of the art, it was to reflect to international research, trends and policy recommendations, such as implementing inquiry based science learning, applying a complex approach to learning, creating learning environments that improve creativity as well as fostering collaboration

between schools and communities and prioritising sustainability learning and inclusion (with special respect to gender parity).

The first step towards understanding the problematic situation was naturally literature review. However, according to SSM logics, the models described in the literature did not mean models to be tested. Instead, these models guided the directions for development and adaptation: they served as patterns and “raw materials” for preparing the components of the educational programme, which were to be piloted in the next cycles.

The problematic situation was, therefore, how an educational programme can be prepared, which relies on the good practices present in the daily practice of the educational institutions, but which also corresponds to international policy recommendations, trends in STEM or STEAM learning, and which also meets expectations towards such a complex science education programme for all-day schools.

Further inquiries revealed tensions between institutional practice, expectations and trends, which made it necessary to revisit the preparatory steps of the programme development as well as the development process itself several times. Collaboration between researchers, experts and teachers seemed unquestionable and inexorable: an RDI concept framework was established to identify and describe roles and milestones, which was also revised and modified³ several times.

The RDI concept framework set the parts of the programme to be developed by the team members of the research institution (namely the pedagogical concept, the mentoring and the professional learning programme), which were then refined via intense professional discourse with the teachers from partner schools as well as with external experts.

In order to guide efforts, before revisiting the problematic situation, a set of success criteria was established based on a public Delphi research (see in 4.2).

Based on inquiries in this phase, the problematic situation was rephrased as follows: how the programme modules can be co-created with schools and their teachers in a way that they reflect to the most possible extent to success criteria and the priorities drafted in the pedagogical concept.

³ For example, this concept framework favoured situated learning as a central didactical approach, but it was a completely unknown method and work form in most partner schools. Finally, although the original concept included it, the pedagogical concept of the educational programme placed less emphasis on this, and it is only exhibited in some of the modules. Although the team still considers situated learning as an excellent approach framing all theme priorities, it was observed that most schools faced significant difficulties in piloting with that. Therefore, situated learning was referred to as an approach to be exploited in further waves of the project.

UNFOLDING THE PROBLEMATIC SITUATION

In order to clarify the problematic situation, further inquiries were needed about the Hungarian school system in the context of all-day schools: this was conducted in collaboration with other teams preparing thematic extracurricular programmes, using online questionnaires. Although this was rather a structured data collection than a proper quantitative research (mainly due to sampling), yet it was suitable for guiding the team and initiating questions that had to be visited in further, mainly qualitative research activities (predominantly focus groups, semi-structured group interviews, individual structured and deep interviews with school principals, teachers and parents).

It was necessary to establish a set of success criteria which can reveal directions for developing the programme. According to SSM logics, the intention was to disclose needs towards the reality. With the public Delphi method chosen to this purpose, the team revealed ten success criteria. Then these criteria were tested against the ideal model based on the literature review as well as against the data gained from preliminary research on all-day schools. This involved multiple iterations, which all lead to better understanding the problematic situation, gaining a more sophisticated view with a number of tension points, such as:

- A wide range of altering views on scientific literacy and sustainability;
- In most schools, the innovation culture and the reflective practice regarding teaching as an ongoing individual professional development have not been well established;
- Lack of thorough concise knowledge of the national core curriculum and subject-related frame curricula, which also effects the application of hierarchy of objectives, conscious planning, and linking indicators and milestones to pedagogical aims or objectives;
- Teachers perceive even the minimal professional follow-up activities (such as making lesson notes, drafting lesson plans, collecting resources, preparing assessment grids or completing checklists) as “administrative workload”, and in most cases they try to apply avoidance strategies when facing these;
- Learning in most schools is determined by a deficit model and a fixed mindset (Dweck, 2006), as opposed to focusing on achievement and individual development.

Overcoming the deficit perspective was equally important to harmonising with policy and research requirements set by the success criteria revealed in this work phase. At the same time, these tension points underlined some directions for purposeful interventions.

CREATING INTERVENTION MODELS

Overarching priorities and success criteria were also integrated in a learning environment model (Manninen et al, 2007). These materials in a form of brief summaries, design and assessment templates and graphical presentations were introduced to partner schools: also they were made available in a digital collaborative platform.

In the beginning of the collaboration, team members were looking for elements of good practice in this context, when visiting partner schools. The totality of these good practices meant milestones to preparing intervention models. The aim was to take steps towards the desired (idealistic) model, while enabling schools to take autonomous steps in implementation, building on their own strengths. In the case of partner schools, with the help of guidelines, templates, online support and on-site mentoring teachers were expected to take these steps at least at the level of formulating objectives and starting planning. These first drafts became the bases for structured discussion and piloting later, and also got revisited several times, just as the guiding materials (based on the experience from how teachers managed to make use of them).

During collaboration, partner schools required some guidance, for example in choosing topics for modules. This scaffolding was undertaken by the science education team, but at the same time, teachers were encouraged to work autonomously. Empowerment was a central element, which required more time and effort than originally planned, but it also indicated its relevance in the mentoring and professional development programme, where empowerment became a key concept.

STRUCTURED DISCOURSES BASED ON THE MODELS

Team members conducted participatory action research in each partner school in at least two waves with at least three cycles each (all in all 24 waves befell). Action research reports and all other observation diaries (from those activities which were not part of the PAR cycles) formed the foundation for professional discourses, which lead to refining the programme elements.

REFINING MODELS

All modules were created in an educational reconstruction process (Duit et al, 2012), and then adaptations were made in other schools. The results from these had to be considered when refining these, as well as reflections to other programme

components (such as assessment or the pedagogical concept), which were collected in open workshops. These results were organised in a matrix which facilitated identifying the necessary changes.

DETERMINING DESIRED INTERVENTIONS

From the initial pedagogical concept, Gardner's multiple intelligences theory and open inquiry activities got the most emphasis, thus the professional development programme also focuses on supporting these. Based on results from convergent interviews (Dick, 1990) during PAR cycles, the module template was also reshaped. External experts made valuable contributions to rethinking the mentoring system, when formulating reflections on the whole development process.

PRACTICAL PROOF OF INTERVENTIONS: REFLECTIONS

Analysing teachers' reflections in and on the assessment templates that guided the adaptation of modules lead to formulating checklists and guidelines for assessment and implementation.

CONCLUSIONS

SSM framed the whole RDI process, synthetizing various research and inquiry activities linked to developing the science education programme. The programme itself seemed appropriate and suitable for adaptation at national level, while the pilot phase initiated favourable changes in the partner schools despite (or due to) the fact that not all methods and approaches recommended by the literature became incorporated in the final educational programme.

This project can be interpreted as a model experiment, which showed that SSM can be suitable for supporting participatory content development efforts.

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JANKA KALOCSAI

Inclusion of Educational Programmes in Teacher Training

There is no uniform practice of how newly developed educational programmes are introduced in the public education system of different countries around the world (Balogh et al, 2010). In Germany and Finland, for instance, educational developments are determined by the internal needs of schools and are funded from public resources or by the market (Sahlberg, 2010). In the Anglo-Saxon countries, new developments are centralised but the market is also a strong component. It is also related to how newly developed contents reach teachers: in many cases, teachers learn about new content in the form of manuals at continuing training sessions.

The literature distinguishes three models of curriculum development (Fazekas-Halász, 2014). In the so-called “loyalty model” the success of the educational programme to be introduced depends on how closely (loyally) the teachers follow the developers’ specifications. The basic concept of the model is that ideally it should lead to same practice in every classroom in a standardised fashion. Developments based on the mutual adaptation model broke with this ideal. They realised that schools are different from each other, therefore implementation can only be successful if the developers take local needs into consideration, and if the implementing teachers are prepared to change their educational routines. The third model is the school-level curriculum development model: problems the development project should address are taken from classroom practice, and pedagogical innovation strives to provide effective solutions. This, of course, means that schools have different points of intervention, and schools have their own specific curricula. Although to a differing extent, the precondition for success in all three models is that the environment, institutional system and stakeholders of education should have sufficient implementational intelligence (understanding, learning, and self-reflection) (Hopkins et al, 2014). Implementational intelligence is particularly important in cases where teachers’ local-level professional decisions,

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creativity and sense of innovation are closely linked to the process of curriculum development rather than “simply” executing (for example in the case of a new framework curriculum). Teachers’ aptitude to learn is appreciated, and the role of a supportive environment (training, school, communities of practice and learning, networking) is equally outstanding. It is naturally important if teachers face the “new” requirements not only at work, in the school, but already in their initial teacher training.

Pedagogical innovation often finds its way into tertiary teacher training relatively slowly. One reason is that developers of new content are generally market players (e.g. publishers), or professional institutes of national importance (European Commission, 2010). In Germany, research facilities are typically linked to teacher training institutions, and research related to educational effectiveness and pedagogical programmes is regular. Teacher trainees are able to take part in research projects during their studies; this strengthens their methodological culture and openness to innovation (European Commission, 2009). The involvement of teacher trainees in educational research and later in reflexive, research-based educational practice is also typical of Finland (Sahlberg, 2010).

The Hungarian Institute for Educational Research and Development (HIERD)¹ has developed complex educational programmes in six areas² providing support primarily for all-day schools in organising extracurricular activities. The programmes were piloted in 42 schools:

- Science education, complex art education, and lifestyle education programmes have been developed for grades 1–8 of all-day schools;
- The “Eco School” educational programmes has also been prepared to assist schools with meeting the criteria required for the “Eco School” title.

Educational implementation research is focused on forms of learning embedded in teachers’ daily school practice as they are directly related to practical problems teachers encounter day by day in their professional work (Bakkenes, 2010). A development programme is deemed successful if it generates the desired effect and is feasible in practice (Halász, 2012). In our approach, feasibility depends largely on how the actors participating in the development process and those in

¹ Phase 2 of the SROP 21st Century School Education (Development and Coordination) programme’s priority project 3.1.1-11/1-2012-0001.

² Pursuant to § 6 (1) of Government Decree No. 110 of 2012 (4 June) on the publication, introduction and implementation of the National Core Curriculum, the educational programme is “a system consisting of seven elements developed on the basis of a particular educational concept which helps the planning and organisation of education, promotes the educational goals set in the NCC and a particular framework curriculum, and supports the processing of contents. As a minimum it refers to a subject or one or more fields of specialisation or educational phases.”

the position to promote and disseminate the programmes respond to the goals of the development project, its applicability and dissemination. This paper explores a direction somewhat different from the traditional implementation research. Our aim is to present the possibilities of integrating educational programmes resulting from development into teacher training.

In our study, the possibilities of inclusion of educational programmes into teacher training were examined in two groups of stakeholders. One group comprised the experts, heads of institutions and teachers involved in programme development; the other group consisted of college or university teachers active in teacher training, mentor teachers supervising trainee teachers in schools which serve as placement sites for the compulsory teaching practice, and students. A total of 78 interviews were conducted. In addition, 10 focus group interviews were also carried out with students in seven locations in and outside Budapest.³

PROBLEMS ARISING IN TEACHER TRAINING

Special attention was paid to exploring the most typical problems and gaps in teacher training in both target groups. Despite the considerable changes that have taken place in teacher training in Hungary over the past decade, with a priority aim of increasing the numbers and rates of practical classes within the training programmes (Rapos-Szivák, 2015), the interviews suggest that practical training is still the most criticised area in both the trainees' and the trainers' view.⁴ According to the respondents, although there have been positive shifts in recent years, the training of teachers (especially of ISCED 2 and + teachers) is too theoretical in two respects. On the one hand, school-based practice is insufficient; on the other hand, tertiary level training is not practice oriented enough: there is not enough focus on what is happening in public education, and the training does not support the implementation of principles and theory in practice. The issue of balance of theory and practice in training is aggravated by different actors' complaints that trainers have little idea of what is really happening in schools. In many respondents' view, besides the lack of connection with the various levels of education, one reason for this shortcoming is that teacher trainers at universities have no public education

³ The research was conducted by Ipsos LLC in August and September 2015.

⁴ Before describing the findings it should be noted that there is no uniform teacher training in Hungary. The quality of training depends on the training institutions, and it also transpires from the interviews that lower-grades (ISCED 1) teacher training equips trainees with a lot more hands-on knowledge than higher-grades and secondary school (ISCED 2 and 3) teacher training programmes, and is consequently less criticised

experience, or if they do, it is outdated. Lack of coordination is not only found in the theory and practice sides of training; it is also typical of the educational psychology and methodology courses.

Another problem is lack of hierarchy: the elements of training are not built on one another and the teaching practice is not properly linked to the theoretical part of the training. The students do not find room for feedback. It emerges from the interviews that teaching placement sites are not quite suitable for showing trainees what awaits them in an “average” school once they graduate. A basic problem, as transpires from the following interview excerpt, is that placement sites depict a monochrome picture of public education and the students do not really encounter reality during their placement.

“(...) somehow would-be teachers should be taken to schools where they see real life because the world of placement sites is totally different from reality.” (Teacher participating in the development projects)

Getting to know the reality of schools is also related to the problem that higher education does not prepare for tasks related to integrative teaching at all. Despite the fact that students with special educational needs and socially disadvantaged backgrounds are also part of classes at school, young teachers are not equipped with tools to handle this situation. In this context, the need to promote students’ awareness of social differences and to enhance their sensibility and empathy cropped up repeatedly in the groups of higher education trainers and mentor teachers.

Inappropriate temporal coordination of theoretical and practical training and lack of consultation is only one aspect of the manifestation of the problem. It seems that the transformation of methodology has been widely required by the respondents but there are still a lot of retractions. The trainers have formulated some criticism about the application of new methodologies. In their opinion, it is difficult to shape students’ approach and to change their concept of the role of teachers because students are captives of the role patterns they have brought with them. It is very hard to instil new methods and techniques and particularly a new world view in students.

The most important experience from the focus group interviews with the students was that besides their anticipation and enthusiasm they also feel a lot of anxiety and uncertainty in connection with their chosen career. This uncertainty is exacerbated by the fact that their teaching practice only comes in the last year of training, so it is only then that they may find out whether or not they are cut out for the teaching job. This transpires from the following two excerpts:

“the practical part at the end of the training, but it also happens that we only actually see children in the last week and a half, and there are some who realise just then that’s not really what they want to do.” (Student)

“(...) I would let them spend more time in the school so that they feel the weight (...), so that they find out what they will encounter in real life and not to throw in the towel after the first semester of their career.” (Teacher participating in the development projects)

THE ROLE OF EDUCATIONAL PROGRAMMES IN TEACHER TRAINING

One of the principal aims of the interviews was to map the role and place of educational programmes in teacher training as seen by the stakeholders involved in the study. Each school head and teacher involved in the development projects had positive experiences about the educational programmes developed: the development and the piloting of the modules brought teachers closer together, the relationship between teachers and students improved, students’ skills and competences were boosted, the teachers became more open in their approach, and their methodological tool kit expanded.⁵ According to the opinion of the teachers involved in educational development programmes, these programmes have a place in teacher training mainly because they work well, they expand teachers’ pedagogical tools, and they make learning fun for students while at the same time they develop key competences.

As seen above, the most common criticism related to teacher training is that it is not real-life and practice oriented enough, and that the detachment of theory and practicum creates difficulties. In the interviews, every respondent group voiced the opinion that educational programmes could strengthen the practical side of training as they help plan a lesson, deepen pedagogical and methodological knowledge, and make teacher trainees aware of the school’s specific problems and the ways in which they are addressed in practice. The programmes would also help in relieving students’ uncertainties, as they would give them hands-on tools for immediate use. As revealed by the next interview, having a glimpse into educational programmes teacher trainees would have a better view of the challenges emerging in schools:

⁵ For more details about the impact of the programme, see Kalocsai, Janka (2015): A fejlesztés tapasztalatai az intézményvezetők és pedagógusok szemszögéből [Experiences of developments from the perspective of school heads and teachers]. In: Varga, Attila (ed): Gyakorlat, reflexió, innováció [Practice, Reflection, Innovation].

“They would get a better feel of what a school actually means. Because educational programmes are primarily about what problems I’m faced with and how I can solve them.” (Head of institution)

The students also mentioned as a problem that the elements of the training are not built on each other and the teaching practice is not sufficiently connected to the theoretical side of training. Both the trainers and the students also thought that given their complexity, educational programmes could be suitable for encompassing and structuring the elements and fragments of educational and methodological training that are scattered through different courses at different stages of the training.

While the survey highlighted the widespread need among public education stakeholders for methodological transformation, there are still a lot of uncertain feelings and misgivings among mentor teachers, higher education trainers and even students. The appearance of novel methods in teacher training through educational programmes could enhance methodological diversity. A key feature of the educational programmes in the focus of the study is that they strive to move away from the traditional teaching-learning techniques and break out of the teacher-student box. They expect an experimenting and innovative attitude of teachers, openness and a novel approach, and a readiness to apply alternative techniques.

“We need the educational programmes to give ideas, to start a new way of thinking. I think they are definitely needed in teacher training.” (Head of institution)

“It would be necessary for students to know more about these programmes because they would be getting an incredibly good supportive device in their own personal development as teachers, a tool to learning about new methods, and it would also mean a lot in changing their approach.” (College trainer)

Integrative teaching, equal opportunities and social awareness are concepts that seem to be largely missing from teacher training. In the opinion of the teachers of the schools involved in the development projects and college trainers, educational programmes would be beneficial to the students also in this respect, as one of the key objectives in the development of the programmes was to compensate for disadvantages and to develop students’ social skills, as well as to educate them to an attitude of tolerance. Renewal of methodology and embracing a new approach also means that according to the teachers, extracurricular activities are gaining importance in schools but these activities have not yet found their way to teacher training. Integration of newly developed extracurricular educational programmes in teacher training could tackle this problem: it would highlight the fact that organising leisure time activities is also part and parcel of teachers’ work, and through the programmes, students would be acquainted with tools and methods to carry out this task.

INTEGRATION OF EDUCATIONAL PROGRAMMES INTO TEACHER TRAINING

In the course of the research, emphasis was laid on exploring the opportunities and barriers of integrating educational programmes in teacher training. Interestingly, actors involved in the development projects tend to see the place of educational programmes in subject related methodology, while trainers envision familiarisation with educational programmes in the context of educational science and psychology courses and teaching practice. Students proved to be the most enthusiastic: disregarding administrative drawbacks, they would typically welcome educational programmes in the form of a practical course or a seminar in a whole semester, preferably towards the end of their teacher training, as a form of summary.

The group of teachers involved in development is divided as to whether the educational programmes developed should be presented in teacher training in their entirety or in the form of excerpts focusing on the key results. Not surprisingly, the experts, teachers and heads of institutions involved in the development would welcome the entire programmes in teacher training but they are equally open to see the integration of only a few components. While the teacher training institutions seem to be open to the programmes, few respondents consider it possible to integrate some of the programmes into the training in their entirety. In their opinion, the reason is partly a lack of time, and partly the restrictions on what can be incorporated into curricula and syllabi. As a separate course, it would have to go through a cumbersome accreditation procedure. Modifying the topic or contents of a course is somewhat simpler but still fraught with difficulties.

Not having trainers in higher education who are thoroughly familiar with the programmes and would be able to convey them in a credible fashion also seems to be a problem. In the opinion of some respondents, a possible solution would be to invite teachers who participated in the development to introduce the programmes in higher education; others think that interested trainers should be acquainted with the programmes in the context of continuing education and training. Based on the research findings, there are significant differences between placement sites in terms of their openness to apply the newly developed programmes and their willingness to participate in preparing trainee teachers for working with them. Most mentors consider it feasible to present educational programmes as part of the placement if the placement site itself played a greater role in the familiarisation with the programmes. Some mentioned that due to a lack of time the role of schools serving as placement sites cannot be expanded to acquainting students with the theory behind the programmes; in other words, familiarisation should be done by the placement sites and the higher educational institutions in collaboration, the higher educational institutions undertaking the theory, and the schools contributing the practical side.

However, as has been pointed out, in practice collaboration is limited and has barely any official framework; therefore, it requires a great deal of dedication of the trainer in the higher educational institution and the mentor alike. It was also suggested that the integration of educational programmes into teaching placement would be simplest and most effective if the base schools⁶ were involved in the network of institutions that serve as training sites for future teachers. If this is not possible because of student headcounts and quotas, the institutions involved in the development and drawing from its benefits could still feature as sites at the teaching observation stage.

Based on the interviews, mentors as well as trainers at higher education institutions have a major role in disseminating the programmes. The interviews point out that while accreditation is burdensome in both teacher training and placement sites teachers and trainers have a relatively greater freedom in choosing the content of particular course. This and the difficulties of the official bureaucratic procedure suggests that the quickest and most effective way of integrating the programmes into higher education and the placement would be if the trainers in higher education and the mentors at the school sites were familiarised with them in depth (or even if picked out some of the elements they particularly liked). If this were the case, they would be likely to integrate the programmes in their field of teacher training in one way or another. A crucial condition for this would be the widest possible dissemination of the educational programmes among stakeholder groups.

“This can only be done if the people who teach these subjects were familiarised with these materials and realised they are really valuable, and then they would take the initiative to incorporate them in the syllabus, of their own volition.” (University trainer)

The researchers also took stock of the difficulties of integrating the educational programmes, some of which have already been described above. The most general and often articulated criticism on the part of higher education and placement sites is lack of time in all areas of teacher training, and methodological conservatism on the part of students, mentors and trainers alike. In this connection, the overload on mentors and students has also been mentioned. A special time management problem is that the modules developed in the context of the programmes are 3 x 45 minutes whereas the teaching practice is discharged in the framework of 45-minute lessons. Fitting in with the time frame of the placement is not the only problem; the fact that each module takes up three full teaching hours impinges on the practice time, which is deemed too short anyway.

⁶ Some of the schools involved in the piloting continued with the programmes and act as base schools whose main task is to disseminate the educational programmes, acquainting other schools with them.

SUMMARY

This study presented the possibilities for integrating the educational programmes developed with the collaboration of HIERD into teacher training. It was pointed out that the programmes would present an adequate solution for the majority of the most typical problems related to teacher training. There is a great deal of openness on the part of stakeholders involved in the development and those with an insight into teacher training. The first and pivotal condition of the educational programmes' integration into teacher training is their widest and most effective and illustrative dissemination among teachers and trainers. It is not only a Hungarian trend that tertiary level teacher training comes into the focus of educational policy (Stephenson and Ling, 2014). Naturally, the ultimate goal is to improve students' performance and to enhance the effectiveness of public education. This can be achieved primarily by expanding the practical side of teacher training: the practicum of teaching should be part of the training throughout its entire duration, there should be a close collaboration between the stakeholders involved in teacher training, and planning and mentoring should be given sufficient emphasis (European Commission, 2012). However, the type of placement makes a difference. Christine Ure describes four models of preservice placement in teacher training: partnership and collaboration (teacher training of teacher candidates is part of the school's development); clinically applied practice (placement sites are excellent schools where the teaching practice is supervised by experienced mentors); reflective learning (where the aim is to develop candidates' approach and attitude); and pedagogical content knowledge focused model (the teacher training is focused on the mastery of multi-dimensional pedagogical content and methods) (Ure, 2009). Although teacher training in the Hungarian environment is dominated by the clinically applied placement model, in our opinion, the propagation of educational programmes would be given a strong impetus if the partnership and collaboration model also gained ground. After all, not only teacher trainees but also the institutions should benefit from the new programmes.

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ATTILA VARGA

Structural and Funding Conditions for the Introduction of All-day Schools

INTRODUCTION

In Hungary developments concerning all-day schools are closely linked to international development processes aimed at the extension and enrichment of school time. The educational concept in the background of enrichment programmes is based on two facts: on the one hand, wider time frames can lead to better educational results; on the other hand, families having better living circumstances can more easily afford to buy additional teaching time for their children than socially disadvantaged families. Thus extending the learning time offered by schools is an important tool to promote equal opportunities. In his study prepared for the United States' National Center on Time and Learning Farberman (2015)¹ gives an overview of research in this area and finds that extending school time can have a significant impact on students' scholastic achievement, particularly to those of economically disadvantaged families. In recent years, research in the field gained momentum. Since 2013 findings of research addressing extended learning are published in an independent periodical². Research attempts to explore the factors behind the effectiveness of extracurricular activities (Kielblock, 2015), and to demonstrate the effects of extended school time in managing different problems such as, for instance, juvenile delinquency (Huang et al., 2014) or educational inequalities (Fischer et al., 2014).

¹ <http://www.timeandlearning.org/> The Center's goal is to coordinate and support schools and school maintaining organisations that strive to promote the development of their students outside the traditional teaching time frame.

² Journal for Research of Extended Learning <http://www.budrich-journals.de/index.php/IJREE>

Attila Varga: *Structural and Funding Conditions for the Introduction of All-day Schools* In: Fehérvári, A. (ed): Curriculum, Effectiveness, Equity. HIERD: Budapest pp. 57–67.

Relying also on this international scientific background the Hungarian Institute for Educational Research and Development (HIERD) developed five educational programmes to support the professional work of all-day³ schools (framework programmes for the lower and upper four grades of primary school; complex arts, natural science, life skills, eco school⁴). The research methodologies applied in developing the specific programmes and data describing the effectiveness of the development projects are described in the respective papers by *Réti and Pallag* in this volume.

After closing the developmental phase of the programmes two research projects were conducted regarding the systemic level introduction of all-day schools in Hungary. This paper analyses how all-day school organisation fits in with the current Hungarian school structure. How receptive the various levels of education are to all-day schools? To what alternative school structure would the all-day school be best suited? An answer is also sought to the question of how big additional resources the general introduction of the all-day school would require.

METHODOLOGY

In the context of the research project addressing the relationship between all-day school and school structure⁵ 26 semi-structured interviews were made with heads of public education institutions including four whose school was subsequently involved in the wider dissemination and demonstration of the educational programmes. Interviews were also conducted with fifteen educational experts about all-day schools and the envisioned transformation of the school structure model. The opinions of school maintainers were examined in the framework of ten focus group interviews. Focus groups comprised 43 educational district heads or educational administration officers representing different regions as well as cities, small towns and villages of Hungary. International experience was also explored (Finland, Poland, Slovakia).

³ In Hungary primary schools currently cover 1–8 grades

⁴ Supported by the European Social Fund, the development project was carried out within the framework of SROP priority project *21st Century School Education (Development and Coordination), Phase 2*. The programmes are available at: <http://ofi.hu/nevelesi-oktatasi-programok>

⁵ The research was conducted by Medián Opinion and Market Research Ltd. of Hungary between July and September 2015.

The project examining the costs of the introduction of all-day schools⁶ analysed Hungarian and international documents (mainly from Great Britain, Germany and the United States). This was followed by 34 interviews. The interviewees included 10 Hungarian educational experts, one expert from the United States, 12 professionals involved in educational programme development, and 11 heads of institutions involved in the development project. In addition, 12 focus group interviews took place, seven involving educational district heads and five with teachers involved in the development.

FINDINGS

Interestingly, the most conspicuous finding was not directly related to the issue in hand, i.e. the relationship between all-day school and school structure. Virtually all individual and focus group interviews brought to the surface the desire that the system should not be subjected to any more substantial transformation in the next few years because the changes started in 2011 (see e.g. Fehérvári, 2015) have not finished to date and not all subsystems have yet been fully developed. Consequently, it is impossible to assess the impact of the changes that have been imposed so far, and it would therefore be dangerous to introduce yet more changes even if they might be useful. The respondents emphasized that if all-day schools were to be introduced across the school system the role of non-school-based study halls (tanoda)⁷ and art schools⁸ should be reconsidered.

The interviews about the relationship between school structure and all-day school clearly pointed out that linking the implementation of the all-day school with a reform of school structure is worth consideration as most respondents are of the opinion that the all-day system can only be applied up to grade 6. The answers seem to suggest that the all-day system would be easy to introduce in grades 1–4 although limiting it to the lower grades would probably not fully serve its purpose. The all-day school should be expanded up to and including grade 6 as grade 5 and grade 6 students still need support in the afternoon within the school system. Conversely, the great majority of respondents were of the opinion that the all-day school is no longer needed in grades 7 and 8 because of the students' daily schedule and programmes and their general age-related characteristics; indeed, introduction

⁶ The research was conducted by Psyma Hungary Ltd. in August and September 2015.

⁷ A 'tanoda' is a study hall-type compensatory institution operated outside the school framework by NGOs or churches. They generally provide activities to disadvantaged students in the afternoon.

⁸ Art schools are a part of the school system offering training in the afternoon generally to students who are gifted in some branch of art.

of the all-day system in these grades would likely be met by strong resistance on the part of students and parents alike.

Another topic that frequently cropped up in the interviews was the kind of social background in schools where introduction of all-day schools would be feasible. Two strong opinions emerged. One group of respondents think the all-day system would be easier to introduce in schools where there is a large number of socially disadvantaged students and this is where it would be really needed. This was also underscored by the analysis of international experience (Kacir, 2013). However, a considerable number of respondents drew attention to the danger of segregation that a selective introduction of all-day school might involve. The prestige of this type of school organisation would be diminished, which would increase resistance to it. Consequently more affluent parents would move their children to other schools, which in turn would further exacerbate segregation, which would lead to even greater resistance... It would easily lead to a vicious circle that triggers the very opposite effect than those intended, and all-day schools may become depositories of students ending up as early school leavers not completing primary education.

There was also a consensus that all-day schools could only meet their goal of reducing attrition if they attract not only the lower social strata but also the middle classes. To achieve this, schools quite obviously need additional resources. It is totally inconceivable that a school functioning on a half-day budget and the relevant physical and human resources would be able to provide the same standard of services in the extended hours of operation without additional resources. The project exploring the funding needs of all-day schools pointed out that in all of the investigated countries introduction of all-day schools relied on substantial financial resources. The analysis of foreign experience also highlighted the wide variability of funding solutions in terms of both extent and form. Additional funding can include the increase of school subsidy, increase of teachers' salaries, employment of additional teachers, grants or overtime payments to teachers, or even involving private supporters to cover the costs of all-day schools. The Hungarian research did not investigate the source of funding; it only tried to give an estimate as to its magnitude.

COSTS RELATED TO ALL-DAY SCHOOLS

Basically there are two categories of costs related to the introduction of the all-day system: ongoing costs and one-off costs. Ongoing costs comprise the additional costs that would recur every year after the introduction of the all-day school organisation. Based on the findings of the interviews, ongoing costs include the following main items:

COSTS OF HUMAN RESOURCES

It can be concluded from the interviews that the human resources needs of schools are rather different. Some schools indicated they would have a shortage of teachers and support staff. The researchers calculated with the most frequently mentioned items and the results seem to indicate that in a school with two forms in each grade the introduction of all-day schools would require an additional 0.5 (part-time) position in grades 1–4, and an additional full position or two part-time positions in grades 5–8. Added to this would be one more full-time staff (teaching assistant) or two part-time staff (e.g. psychologist and/or SEN⁹ teacher) per school. All-day schools would involve approximately HUF 9 million, or approximately USD 36,000 in additional wage costs per school – approximately the average annual income of a teacher by the OECD’s 2015 indicators.¹⁰

MATERIAL EXPENDITURE

If mapping human resources needs gave rise to a multi-coloured picture the same applies even more for material expenditure. Respondents agreed that the volume of schools’ material expenditure had slipped drastically. While the advent of all-day schools would *per se* generate extra material costs, the budget available for material expenditure has been spectacularly curtailed.

The aggregated data available for the public reveal that in 2013/14 the combined material expenditure (equipment, consumables and utilities) of primary schools was HUF 21.6 billion (USD 86.4 million). In other words, the approximately 37,500 primary school forms nationwide spent HUF 580,000 (USD 2,300) per form per year.¹¹ Respondents mentioned essentially two groups of material expenditure:

- Costs intrinsically related to the ongoing discharge of educational programmes and the operation of the school (this group comprises the costs of consumables such as paper, scissors, Kleenex, toilet rolls) but also high-cost assets and equipment (e.g. IT equipment, furniture, etc.).
- Overheads (utilities such as water, gas, heating, etc.).

⁹ Teacher working with children with special needs

¹⁰ The average salary of a teaching assistant would mean HUF 2,300,000 in additional costs, that of a teacher HUF 4,500,000 and that of a part-time teacher HUF 2,300,000.

¹¹ Educational Statistics Yearbook 2013/2014

COSTS RELATED TO THE DISCHARGE OF TEACHING AND SCHOOL OPERATION

This category is the most commonly mentioned potential source of extra expenditure in conjunction with the introduction of the all-day system. With newly added time slots and increasing numbers of students staying on in the afternoon schools have tried to move on to the best of their opportunities and capabilities and have organized new activities, started new extracurricular clubs or expanded and stepped up existing ones. These changes generate extra demands in terms of costs and equipment (e.g. sports articles, toys, developmental aids, decoration, mobile chairs, etc.).

“If we take it seriously that extended school time should be made enriched and more colourful for the children, then in my interpretation this will, by definition, involve more costs. Because, let’s say, you want an arts and crafts club or anything, or puppets or even a games club, you need more money to buy board games which are so popular nowadays. Everything costs money.” (Interview with a teacher)

Introducing all-day schools will primarily involve increased ongoing operating costs and mainly those costs that are related to extended school time and children numbers. As has been seen, these additional costs stem primarily from the consumables and costs required by additional activities, clubs, etc.

Let us start from the macro level and consider the HUF 21.6 billion material expenditure. Supposing that 60% of material expenditure is contributed by consumables and equipment and 40% by overheads, a primary school having two forms per grades, i.e. a total of 16 forms will spend an average of HUF 4 million forints (USD 16,000 USD) on consumables and equipment per year. According to the respondents’ estimate, if the all-day system were introduced, schools would have to reckon with HUF 1 million (USD 4,000) in extra material expenditure per year on the average. They estimate the average difference in the costs of all-day and half-day school is 10%. However, this is only a quasi-difference because there is already a scarcity of funds. The 10% additional funds would be needed not on top of the current level of material expenditure but on top of the level they see as optimal, which is at least double but preferably triple the current material budget. In the respondents’ opinion, the material expenditure budget should be roughly HUF 10–12 million (USD 40–48,000) per year per school for up-to-date and financially smooth operation. It is this budget that would grow by 10% or approximately HUF 1 million per year if an all-day system were introduced.

OVERHEADS

Planning overhead costs was hampered by a major obstacle: most of the respondents have no insight at all into this cost category. The most important overheads items were utilities: heating, water, power, etc. According to our calculations and the interviews, while the consumables and equipment item of material expenditure would evidently increase and would require an expanded budget once the all-day school is introduced, the same does not apply to utilities. Here the increase would only be marginal as almost four-tenths of students currently stay in the school building until 4 p.m. and only electricity and water charges would be somewhat higher.

“If a school offers day care, students stay till four anyway, the heating must be turned on. The lights can be turned off in some classrooms. So practically, overhead costs (power, gas, water, waste disposal) won’t be higher.” (Interview with a head of institution)

“You have to stay in the school until four, then... I’d say another hundred litres of water, it’s really insignificant... Heating must be on because we have to stay till 4 p.m. Sessions don’t make any difference either.” (Interview with a school district head)

Here, too, starting from the macro level and reckoning with HUF 21.6 billion (USD 86.4 million) in material expenditure, 40% of which is overhead costs, a primary school having 16 forms spends an average of HUF 2 million (USD 8,000) per year on such costs. Based on the interviews, introduction of all-day schools would only bring about a minor, 5%, increase in overheads as some of the students stay in the school until four in the afternoon anyway, therefore the building must be heated, lights are used, etc. The 5% increase is only an additional HUF 100,000 (USD 400) per year per institution – almost negligible compared to the increase in the other main material expenditure item and wage costs.

ONE-OFF COSTS

Infrastructure costs

So far the additional ongoing costs involved by the operation of all-day schools have been explored. In what follows the one-off costs of introduction will be analysed. In recent years funds have been extended to schools for IT and other development

projects through several Hungarian and European Union channels, so in this respect schools don't start from zero. However, schools did not have an even share of development, and schools in less favourable conditions tend to be less able to submit innovative applications and secure funding to meet their needs.

In our supposition, the operating conditions of all-day schools are not vastly different from those of the current statutory requirements. Essentially the problem is that a large number of school buildings are far from ideal in terms of interior design and state of repair.

Infrastructure costs have two basic components:

- renovation costs
- investment into new infrastructure developments.

The respondents drew attention to three areas where investment is required for the future, and this plots the direction of development for the introduction of all-day schools.

Expanding the number and capacity of classrooms

A significant number of respondents want to improve the classroom supply. They point out that due to leisure time periods within the school days, divided groups and club sessions, etc. more classrooms will be needed. Higher group numbers is not the only problem; some schools offer special services in the afternoon, for instance music and art teaching.

Quality and comfort of classrooms

The size, interior design and quality of classrooms are also an important consideration as children will spend large portions of their time in these rooms. The following requirements were mentioned most frequently: creation of social spaces; creation of a rest and play corner with carpets and poufs; play corner for the lower grades; decoration, etc.

Specialised classrooms

Creating classrooms specialised for specific subjects is another important requirement. By today specialised classrooms have all but disappeared in schools, partly because the only way some schools could tackle the shortage of classrooms was by giving up and transforming their specialised classrooms. The following special classrooms were mentioned most frequently: arts and crafts/technology workshop or room, art room, computer room, science lab, development room.

Nevertheless, such a scale of investment is not factored into the calculations of costs of all-day schools because the researchers presume that the implementation of the all-day system can be based on the current facilities and larger renovation or

investment projects should be planned and funded primarily from grants. On the basis of the interviews with teachers and experts an average initial cost of HUF 1.5 million (USD 6,000) per school was reckoned with, which would cover minimal projects such as redecoration of classrooms, minor conversions, decoration, etc.

Costs related to professional training

Development experience shows that in order to provide all-day school services at high professional standards resulting in a qualitative change in the life of schools preliminary professional preparation is indispensable, and after appropriate professional support must continue for at least two years after the introduction. This introductory and support system consists of the following elements:

- 60-hour accredited in-service training for school heads and at least four members of the teaching staff on the introduction of all-day schools;
- 30-hour accredited in-service training for at least two members of the teaching staff on the introduction of two issue-specific educational programmes related to all-day schools;
- personal expert support for at least two years after the introduction in the form of at least three personal visits and ongoing contacts; this support is estimated to require two hours of an expert coordinator's weekly work time for a period of two years;
- central coordination and consultation system.

In our estimates, the cost of professional preparation and support should be calculated at HUF 60,000 (USD 240) per 30 hours per participant (this would include participation fees, travel expenses and substitution costs) plus HUF 350,000 (USD 1,400) gross expert consultant's fee. On a per school basis, this means HUF 3 million (USD 12,000) annually, and HUF 6 million (USD 24,000) for two years.

Consequently, one-off costs of the introduction of the all-day system are estimated at HUF 9 million (USD 36,000) per school, to be deployed over a period of two years, so that a school should be able to switch to the all-day format of teaching seamlessly and at an adequate standard of quality.

It is important to note that the all-day school system is primarily a matter of political decision. Professional arguments as well as the findings of this research seem to indicate that the all-day system should be rolled out gradually, and school districts, institutions and parents should have a choice to maintain their current afternoon school system or introduce the all-day school. If institutions and parents have the freedom of choice, those institutions are expected to opt for the all-day system first of all where its introduction does not require costly investment and the level of additional personnel expenditure can be kept low.

CONCLUSIONS

International implementation research proves beyond doubt that the introduction of an educational reform requires time and flexibility on the one hand (see. e.g. Young – Lewis, 2015), and appropriate professional resources and funding on the other hand (Canadian, 2009). International research findings underscore the three basic systemic conditions for the introduction of the all-day system. First, gradualness must be ensured so that none of the stakeholders see all-day schools as a new system forced upon them. Secondly, schools must be given professional assistance to ease the conversion and adapt the system to their local conditions. If a school were to implement the all-day system without organisational changes and professional preparation the result will almost certainly be resistance from students as well as teachers, and the transformation will not deliver the desired effectiveness, it will not reduce the risk of early school leaving, nor will it improve learning achievement.

Based on the findings it can be concluded that in Hungary all-day schools could be implemented across the system in grades 1–4 of primary school with little resistance. If the political intent is to change the school structure and implement all-day schools overall, the system could be rolled out through grade 6 without significant resistance. However, deeper changes relying on cross-sectoral cooperation would be necessary for expanding the all-day system to higher grades.

Last but not least, since the promotion of the all-day system is closely linked to the first two conditions such an effort could not succeed without the elimination of the current scarcity of funds at schools, the ongoing financial support of the implementation process, and meeting schools' needs for additional resources.

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MÁRTON BODÓ

The Role of Teachers in the School Community Service¹

INTRODUCTION

In 2010 an American meta-analysis comprising 62 studies that involved 11,837 students pointed out that students who participated in service-learning scored a significant progress in five areas compared to the control group: attitude towards themselves, relation to school and learning, social responsibility, social skills, and scholastic achievement. This result could be the driving engine of the expansion of service-learning and community service programmes worldwide, and induces researchers to explore these programmes in depth in order to have a clearer idea of how students benefit from community service and what conditions promote their growth and strengthening. Hungary started to phase in community service in the 2012/13 school year drawing from the community service which is part of the core programme of the international baccalaureate and Waldorf schools, and the diaconate ministry and charity service embraced by Church schools. In the Hungarian system, performance of 50 hours of community service is a precondition for the commencement of secondary school leaving examination. Following the pattern of service-learning programmes, five hours are spent with preparation and five hours with reflection. At the same time, it follows the logic of community

¹ Compulsory community service was introduced in Hungarian secondary schools in 2011 by the Act on Public Education. The Act defines community service to be performed by secondary school students as “social and environmental protection activity, as well as its educational processing, carried out individually or in groups for the advantage of the local community of the student, which is carried out within an organised framework and is independent of financial interests.” The Hungarian school-related community service programme is a mixture of service-learning and community service programmes, hence the term School Community Service is used in this paper.

service in that it is not integrated into the curriculum and is primarily undertaken as an extracurricular activity. The primary purpose of the programmes is to instil volunteerism in students.² Through experiential learning it aims at promoting social sensitisation, personality development, effective citizenship and career guidance. School Community Service activities can be deployed in the following eight areas: health care, social services, culture, education, disaster management, crime and accident prevention, environmental protection and nature preservation, and leisure activities for various age groups.

The teacher is a key figure in the effectiveness of all community service type programmes. Our research was focused on learning as much as possible from the teachers organising the activities in the framework of the recently introduced Hungarian programme. The target group of the research³ conducted in the first half of 2015 comprised teachers in secondary schools where students graduate with a certificate of secondary school leaving examinations CSSLE (vocational secondary school and grammar schools). The teacher respondents included School Community Service (SCS) coordinators, form teachers, heads of institutions. The students involved in SCS also constituted a respondent group. A total of 571 schools' SCS coordinators and 529 school heads participated in the survey. The respondent schools are representative of the distribution of schools in Hungary by school operator (maintainer) and region. In seven schools, focus group interviews were conducted with the SCS coordinators and the staff of host organisations, and with students of the school. The paper also relies on the findings of other qualitative research. In the context of the SCS monitoring programme aimed at situational analysis, consulting and support⁴ heads, SCS coordinators and students from 50 secondary schools were interviewed.

² In Hungary, volunteerism and community service are entirely separated by law.

³ Revita Foundation was commissioned by the Hungarian Institute for Educational Research and Development (HIERD) to conduct the research project titled "Experiences of the introduction and implementation of School Community Service in public education." The research took place in the context of Phase 2 of the SROP 21st Century School Education (Development and Coordination) programme's priority project 3.1.1-11/1-2012-0001.

⁴ Monitoring was based on Cooperation Agreement No. 2311/2014 between the Hungarian Institute for Educational Research and Development (HIERD) and the Nation Corps of Teachers (NCT) and followed a protocol specially developed for the purpose, and comprised 3% of the Hungarian secondary educational institution operating a full-time CSSLE programme.

FINDINGS

Let us first consider the problems related to introduction. To the question of “What difficulties do you think you may encounter in the course of your activities related to the School Community Service?” SCS coordinators⁵ mentioned administrative burdens in the first place (74.7%), and overburden of teachers in the second place. In the current Hungarian system, most teachers organise community service over and above their 22–26 hours weekly teaching load, which is often a non-reconcilable difficulty. It is important to bear in mind that community service related activities do not fall within the current typical duties of teachers, therefore support and, in the coordinators’ opinion, an extra five hours per week are necessary (source: HIERD, coordinators questionnaire). Another question is how the school can effectively organise community service in the case of commuter students.

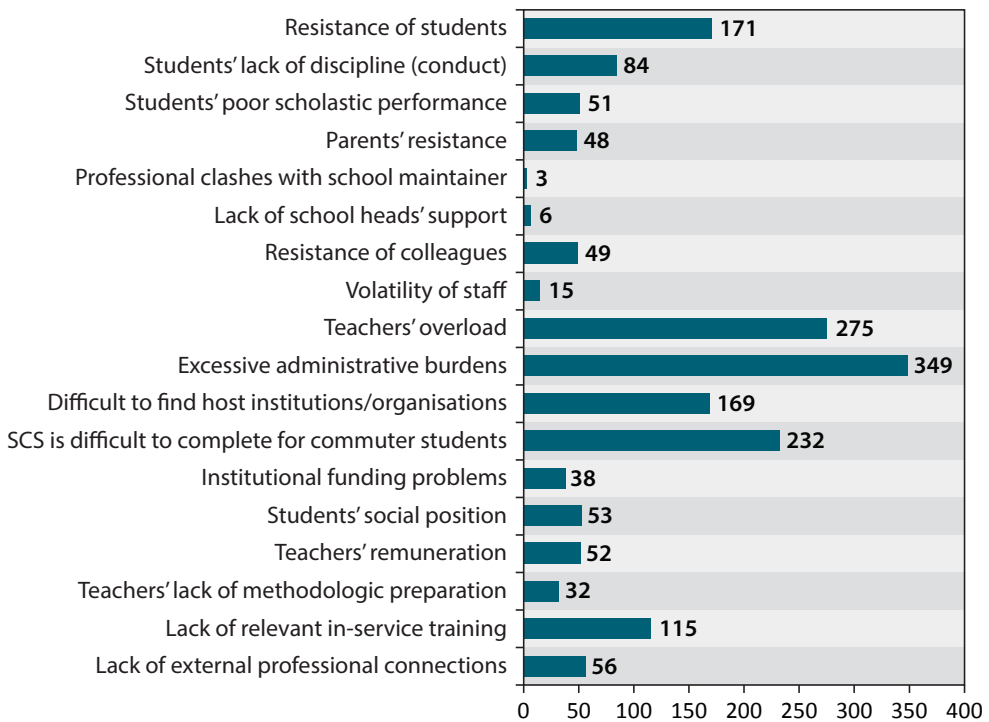


Figure 1 | What difficulties have you encountered as a coordinator in the course of your activities related to school community service? N= 560 (several answers are possible)
Source: coordinators questionnaire, HIERD

⁵ A coordinator is a teacher invited by the school principal to organise SCS, and who is responsible for its operation and the activities related to it. See: FAQ terms: <http://www.kozossegi.ofi.hu/Contents/ShowContentByTitle?title=GYIK>, letöltve: 2016.január 15.

In many cases, the respondent teachers were unclear about the experiential learning tool that was being introduced, so while the acceptance rate of the introduction of community service among teachers is above 95% the teachers charged with coordination are poorly motivated.

This is underscored by the findings of the qualitative survey: *“My first idea was, here’s another task that has to be done, that involves administrative chores and organisation. And only when I later learnt more about it, that’s when I had a clearer picture, but my first impression was, here’s another extra duty to tackle.”*⁶ *“... you are thrown in at the deep end, you don’t know what to do and those who are supposed to be in the know can’t answer any of your questions. You can’t communicate to the students that wow, this is something terrific, kids. At least I certainly couldn’t, I’ll give you that. All I saw at the beginning was that it was just a heap of extra paperwork.”*⁷

Schools are not in the position to remunerate or otherwise reward the coordinator for undertaking the SCS programme coordination. This, however, is not only a matter of funds but also of attitude. Recognition can take many forms but not all educational institutions seem to have it as part of their culture. Many school heads were uncomprehending when faced with this question in the survey: this is a task, they have to delegate it, and it has to be carried out – why should the teacher be praised for it? Compared to the 2015 online questionnaires (Bodó, 2015), the interviews indicate a starker reality: 46% of the teachers received at least verbal commendation in front of the body of teachers or the entire school staff, and about the same rate were granted reduced teaching hours or were exempted from other duties.

From the maintainers’ side, while institutions run by the state maintainer Klebelsberg Institution Maintenance Centre (KLIK) lead in terms of verbal praise (54.1%) and exemption from other duties (31.9%), Church operated institutions are at the head of the list regarding reduced teaching hours (2.6%) and end-of-year bonus (22.2%). Institutions operated by business associations tend to give end-of-year bonuses in greater proportions (44.4%), but these institutions are few and far between nationwide, consequently they have a very minor impact on teachers’ attitude. We can only make guesses about the remuneration system of Church schools (as they were not included in the 2015 monitoring), but the differing scope of movement of Church and state school heads obviously makes a difference when it comes to recognition, and based on their previous experience, Church school heads may be more sensitive (Bodó, 2014).

⁶ Source: the research project described in footnote 3; teachers focus group interview, 5.1, HIERD.

⁷ Source: the research project described in footnote 3; teachers focus group interview, 1.1, HIERD.

Table 1 | Forms of recognition of coordinators' work by school maintainer (rate of choice, valid %) (N=513) Source: School heads questionnaire, HIERD

Method of recognition of the coordinator's work	Type of school maintainer					
	Foundation, association (NGO)	Church	Klebelberg Institution Maintenance Centre (KLIK)	Business association	Other (primarily state owned)	Total
Verbal commendation before the teaching staff	9.5	31.1	44.2	30.0	35.3	38.1
Exemption from other duties	26.2	21.1	31.9	10.0	15.7	27.7
Reduced teaching hours	4.8	25.6	16.4	0.0	24.0	17.5
Verbal commendation before entire school staff	0.0	7.8	9.9	20.0	2.0	8.1
End-of-year bonus	16.3	22.2	0.6	44.4	3.0	6.6

Teachers' attitude to SCS coordination is predominantly determined by their attraction to new professional tasks and their experiences in volunteering (Fényes, Kis 2011) .

Table 2 | Coordinators' involvement in students' SCS activities (valid %) N=547 Source: Coordinators questionnaire, HIERD

Coordinators' involvement in Students' SCS activities	Accompanies students to the host institution outside the school (without taking part in the activity there)			Takes part in the SCS activity at a host institution outside the school together with the students		
	I have been appointed SCS coordinator, it is my job to coordinate SCS activities in my school	I am not an SCS coordinator but I perform SCS related tasks	Total	I have been appointed SCS coordinator, it is my job to coordinate SCS activities in my school	I am not an SCS coordinator but I perform SCS related tasks	Total
Never	18.7	28.8	20.7	37.4	50.0	39.8
Rarely	61.9	52.9	60.1	49.7	40.0	47.8
Often	19.4	18.3	19.2	12.9	10.0	12.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

The importance of participation in the activities cannot be overemphasized, as it is through participation that teachers too are sensitised to the particular activity. The task is new and not all adults are involved in volunteering, therefore it is particularly important that teachers gain first-hand experience of the concrete activities (Fényes, 2015). The law does not apply the term ‘educational monitoring’⁸ HIERD’s website (www.kozossegi.ofi.hu) has the following on its FAQ page: “The coordinator or another teacher, if any, responsible for the implementation of the programme (for instance form teacher) should preferably be there at the first activity sessions so that they see and familiarise with the students’ activities from personal experience. As regards *monitoring the programme*, the teacher should from time to time inquire about the students’ experience and difficulties. Regular contacts, cooperation and monitoring are necessary.”⁹

According to the research findings, very few of the teachers involved actually take part in the activities especially if there are many commuters among the students. In many cases, teachers did not have a clear idea of what ‘educational monitoring’ meant; they thought it involved the physical accompanying of students. It is to be noted that given the burdens on SCS coordinators, it is physically impossible for them to attend their students’ community service activities on a regular basis except where the school inserted this requirement in form teachers’ job description, but this happened only in very few cases. They are more likely to do all the paperwork and in most cases, there is no preparation and reflection, or if there is, it is haphazard. This was confirmed by the students who are the first, in 2016, to be subjected to the 50-hour school community service. The questionnaire-based representative survey depicts a somewhat more positive picture: 79.3% of teachers see their students to the host organisation at least once, and 60.2% participate in the activities of the host organisation at least once. To illustrate the contradictory situation, we quote from the transcript of a teacher’s and a student’s opinion: “*When we do something as a group, that’s when we go with them. Not just to supervise them but also to share the community experience, because we have to be there, too. Otherwise it’s we go*

⁸ Decree No. 20 of 2012 (31 August) of the Minister of Human Capacities on the operation of educational institutions and the use of name of public education institutions, Title 45: Provisions relating to community service, § 133 (5): “The teacher coordinating community service performed by a particular student shall offer no more than five hours of preparation and no more than five hours of reflection within the 50-hour time frame of the community service, together with the mentor if necessary.”

⁹ Translator’s note: In Hungarian the word *kísér* can mean *accompany*, *follow*, *track* or *monitor*. *Educational monitoring* is the same in Hungarian as *educational accompanying*, i.e. being accompanied by a teacher; hence the misunderstanding among some of the surveyed teachers.

this way, they go that way, it doesn't work like that"¹⁰ "Has it ever happened that someone from school went with you to the host institution? (giggles) Well, no. What is this supposed to mean, this giggle? Yes, I would like you to translate the giggles for me. Well, obviously, no. It would be so absurd. Why would it be absurd? Because they just don't care, least of all to shepherd us around to a place like that. And okay, I'll be accompanied to ... but by whom? The teacher? There is nobody who would be responsible for it. It's not organised."¹¹

Based on the antecedents, these answers require some interpretation. The teachers have learnt how to answer. From the question they glean the "right" answer, the sort of answer expected of them, which, however, does not tally with their actual educational practice. The rate of teachers frequently accompanying students seems to be closer to reality in the quantitative questionnaire: 19.2% indicated they often accompany their student but don't participate in the activities at the host organisation, and 12.4% stated they also participate. Another possibility is that since the quantitative data referred mainly to those who graduate from secondary school and they were the pioneering year, in their case preparation and reflection were shakier than in subsequent years. If this is the case, the reality is closer to the online respondents' answers than to the facts as indicated by them and the students. In any case, for teachers to be motivated to participate in SCS and to be able to identify the potential host organisations whose activities are not in line with the goals of the programme, and above all, to be able to support their students it is important that they should be familiar with the activities in which the students participate. Based on the quantitative data, the number of teachers involved in the activities will hopefully steadily increase, and it is also hoped that teachers are aware of participation being part of their duties even if they have not yet managed to implement the theory in practice.

The question is exciting but not because of what it is about at first sight. The answers suggest a more positive picture of students' attitude to a newly introduced compulsory activity than it first appears. As to teachers, 40% are of the opinion that students consider SCS an intrusion on their leisure time; 79% think students see SCS as another duty to meet, 69% find they are interested in it, and 71% of teachers think students are engaged in the experience they gain in the SCS programme. Clearly, this result reflects teachers' opinion about what the students' attitude it towards SCS, and it is not the students' opinion.

¹⁰ Source: the research project described in footnote 3; focus group with the participation of school and host institution staff 1.1.

¹¹ Source: the research project described in footnote 3; focus group with the participation of students 1.2.

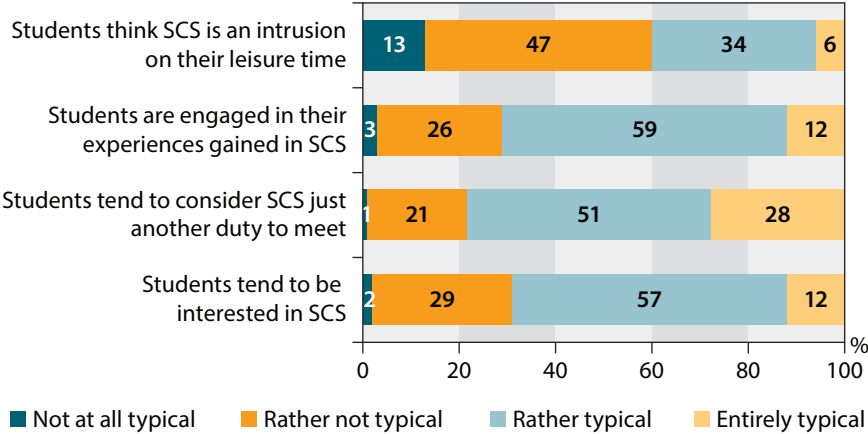


Figure 2 | What is the students’ attitude to school community service in your school (N=562, %, respondents answering on the merit of the question)
 Source: coordinators questionnaire, HIERD

What is exciting is that teachers’ answers seem to be influenced by whether they volunteered to act as SCS coordinators or not. Those who did not choose the task of their own accord tended to underrate the options “*The students tend to be interested in SCS*” and “*The students are engaged in their experiences gained in SCS*” compared to those who volunteered to act as coordinators “through personal motivation” or because they “already have experience with this type of activity” or “play an active role in local events outside the school,” as transpired from their answers to the relevant question.

The same applies to the statement “*Students consider SCS just another duty to meet.*” Those became SCS coordinators because “the school heads so decided” or they were or are “form teacher of the student group concerned” or because of “equal sharing of burdens in the school” were more of the opinion that students’ attitude to SCS was “just another duty to meet” compared to those who are motivated to coordinating community service. The statistical significance test revealed (with significance values consistently below 0.05) that when they assess their students’ attitude teachers’ answers correlate with their own attitude to community service. Consequently, teachers play a crucial role in how students will relate to a particular activity. If teachers are enthusiastic about community service, they will be able to motivate students and the activities will be more useful for students; conversely, an unmotivated teacher emphasizing the compulsory nature of the task will alienate students from community service and may ruin the student’s chances of feeling useful and acquiring useful experience (Molnár, 2015).

CONCLUSION

The introduction of an innovation is always a process and currently the process is at its beginning in Hungary. As one of the respondent teachers put it, *“Sure, it’s definitely more work for form teachers. Still, I think students’ attitude to community work will change over time. When I asked my 12th graders they said well, it’s compulsory and they really weren’t keen at all, but they did it because they had to. Then I asked my 10th graders and they were a bit more enthusiastic, they thought perhaps they could make use of it somehow, but they weren’t mad keen. Then my 9th graders went and listed a whole range of areas they had chosen. So I the way I see it, after a while, I think maybe this takes some time but they will get used to it and they will accept it and it will get better.”*¹²

It can be concluded that teachers have realised the opportunities in the School Community Service programme but its implementation has difficulties. Making this task a part of teachers’ core duties has set up the programme on a long-term footing because funding problems are no longer a worry. Conversely, effectiveness is hampered by this setup. With an appropriate reduction of the weekly teaching requirement (by no more than five hours or one day) the effectiveness of SCS would be secured and the programme would be more than mere paperwork for coordinators. The programme would be efficient on a nationwide level and would be able to achieve its goal of acquainting students with voluntarism and make them potential future volunteers through their experiences in SCS. (Handy, Femida et al, 2010). The key to successful coordination of SCS activities is how heavy the load on the coordinator. At the same time, it is also obvious that schools have managed to organise community service with more or less success despite the difficulties, and as the years go by the level of organisation improves, students become better prepared, and there is a chance they would realise the benefit of such activities and experiences for themselves (Meszlény, 2015). At this juncture, because of the somewhat haphazard nature of preparation and reflection, the Hungarian model is closer to the community service programmes than to service-learning as known from international literature. In a few years, however, a shift will not be unlikely.

Of course, perfect standardisation is impossible, and it applies to this task too. Every teacher and every student is different and circumstances also change. New meaningful activities should be found, but the objective is that students conclude their community service with the kind of experience reflected in the following report:

“This story was an experience for life for all of us. We learnt that we are able to join our forces and we tested our limits. Everybody was nice to the other person, there were no differences, no dissent. The people in the villages thanked all of us for our help. It

¹² Source: the research project described in footnote 3; focus group interview, p 16.

was a lasting experience for us that the only thing that mattered at the time was that we control the flood. It was nice when the village people brought us food while we worked. We gave and we receive.”¹³

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¹³ The excerpt was taken from the following essay submitted to the competitions “Helping Students 2015” in the students category: A student’s Account of Flood Control by Dániel Rúza, Bercsényi Miklós Secondary School, Győr. See also: <http://www.kozossegi.ofi.hu/Contents/ShowContentById/102>

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Extracurricular Learning – in Different Local and Institutional Contexts

INTRODUCTION

Professional experience shows that extracurricular learning has a significant positive effect on scholastic and non-scholastic effectiveness particularly in the case of socially disadvantaged students (e.g. Mahoney 2005, Eccles 2005). Other authors in international literature link extracurricular activities to not only effectiveness but also lifelong learning and conceive of such activities as a form of learning support (Andrews 2001). Both possibilities probably contributed to an increasing interest in extracurricular learning after the turn of the millennium in research as well as educational policy, primarily in the Anglo-Saxon countries (e.g. Dyson-Todd 2010, Honig – McLaughlin, 2008).

Hungary introduced afternoon primary school up to 4 p.m. at the beginning of the 2013/2014 school year. This expands the possibility afternoon learning for students staying at school in the afternoon.¹ The researchers exploring primary schools' experiences recorded the data in the first year of introduction. Applying both qualitative and quantitative means, the research project analysed experiences related to afternoon sessions from two aspects: institutional and students, and attempted to interpret processes within the theoretical framework of student effectiveness and implementation. The student side of the research investigated participation and the impact on scholastic effectiveness; the institutional side explored the institutions'

¹ This research was conducted in the context of SROP 3.1.1. The researchers were Anna Imre, Nóra Imre, Eszter Berényi, Kálmán Ercei and Krisztina Jankó. The researchers wish to express their gratitude to the schools for their support to this project.

'responses', i.e. the various ways of implementation. The following analysis also addresses the same issues and, specifically, sheds light on the response of different contexts – the response of institutions in different regions and with different student populations to the new regulation (Thrupp-Lupton 2006). The analysis also looked into the areas and trends of institutional changes, including those related to student participation and teachers' working time and duties. According to the researchers' hypothesis, all this could greatly influence the outcome of implementation and also scholastic effectiveness. More specifically, answers were sought to the following questions:

- What are the nationwide trends of extracurricular learning in Hungary; what degree of impact did the new regulation have in the light of statistical data?
- Are there any differences in terms of student participation in the various contexts, the different disadvantaged and less disadvantaged institutions and districts?
- What impacts did the changes have on teachers' duties?

NATIONWIDE TRENDS

The nationwide timelines clearly depict the magnitude and recent trends of participation in extracurricular learning activities. The data indicate that involvement in extracurricular activities had been quite general: already in 2008/2009 the number of primary school students participating in some form of extracurricular activity exceeded the total number of primary school students. In other words, on the average, every primary school student was involved in somewhat more than one extracurricular activity in the course of the school year. In the 2008/2009 school year the most attractive extracurricular activity was school sports clubs but participation in day care and study circles was also widespread. Other activities were far less popular and their contribution to extracurricular participation was below 10%. By the 2012/2013 school year there was a slight change in the order of preferred activities: the attraction of sports slightly decreased while there was more interest in day care, and participation in study circles and study room also slightly increased. In the 2013/2014 school year, year of introduction of extended school (until 4 p.m.) the rate of participants in extracurricular activities rose by another 20% over the 2008/2009 rate. Compared to previous participation, the rates of students involved in study circles, day care and study room increased primarily. The 2014/2015 school year did not bring about a major change but there was a further increase in day care and study room participation while participation in study circles and other activities somewhat declined.

Table 1 | Nationwide trends and changes in school-based extracurricular afternoon activities and participation, 2008/2009 – 2014/2015, N, %

	2008/2009	2012/2013	2013/2014	2014/2015
School sports club	36.03	32.95	30.18	26.0
Day care	33.12	36.02	39.48	42.2
Study circles	31.67	32.26	45.28	42.5
Choir	8.06	7.95	8.24	8.1
Study room	5.18	6.15	10.71	16.7
Art group	5.05	5.91	6.10	6.0
Self-study group	0.45	0.34	0.45	0.4
Total extracurricular participation	119.56	121.58	140.43	141.97
Total number of primary school students	790,722	745,058	750,333	751,034

Source: Institutional statistics (KIR). Edited by Tamás Híves.

Table 2 | Nationwide trends and changes in school-based extracurricular afternoon activities: participation by type of locality, %

	2010		2014		Change: 2014/2010	
	Day care	Afternoon activities	Day care	Afternoon activities	Day care	Afternoon activities
Budapest	47.1	6.4	52.6	14.5	5.5	8.0
Village	29.6	6.3	39.1	24.3	9.5	18.0
City with county status	39.3	6.2	44.8	17.9	5.4	11.6
Town	32.8	4.4	38.9	16.1	6.1	11.7
National	35.2	5.6	42.3	18.4	7.1	12.8

In what follows the 2010 and 2014 statistical data regarding day care and afternoon activities are analysed in a territorial breakdown. Changes in extracurricular participation are modest in respect of day care and more significant in afternoon activities. In the four years between 2010 and 2014 participation in day care which concerned over a third of students increased by 7% and reached 42.3%. In the same period, starting from a more modest level of participation, involvement in afternoon activities almost tripled, from 6% to 18% (see Table 2). Participation is highly varied by type of locality: day care is sought well above the average in the capital and in big cities. The reverse appears to be true for afternoon activities: there is an increasingly keen interest in afternoon activities mainly in smaller places and villages and it is in these locality types where the biggest growth in participation was achieved between

2010 and 2014. This suggests that the two types of services have different functions and concern different social groups.

The differing nature of the two services is also conspicuous in the regional and county data. The analysis of the figures in a regional and county breakdown, however, highlights another interesting phenomenon. Participation in day care characterises the Hungarian counties that significantly differ from the above trend: besides Budapest, four Transdanubian and two South Great Plains counties day care participation is way above the average (in some cases over 45%). The increase in participation in afternoon activities between 2010 and 2014 is observed primarily in disadvantaged regions: a rate of increase over 15% was found in Hajdú, Borsod, Heves, Nógrád and Szabolcs counties. (See Annex, Table 1).

LOCAL AND INSTITUTIONAL CONTEXTS

Our research was carried out at the end of the first semester in the 2013/2014 school year. Three districts were chosen for sites, each with differing characteristics. The basis of selection was the schools' social composition, therefore the three districts investigated differed from each other in several respects. Of the three, the most favourable position was found in the selected Budapest district; District J had average indicator values, and District M was worse than the national average. All of the primary schools in the selected districts, a total of 35, were contacted, and the opinions of school heads, teachers, students and their parents about the new situation were sought. The survey was primarily based on the replies of higher grade students (grades 5–8): in the three districts answers of 818 grade 5 students, and of 850 grade 8 students were analysed. This paper relies mainly on the data received from 5th-graders. In the analysis an attempt has been made to keep track of not only the data of the *districts in different positions* but also the *school categories set up on the basis of the composition of the student population of the institutions* as shown in Table 3.

Table 3 | Rate of disadvantaged students in the investigated districts, %

	1–33%	33%–
Budapest	87.3%	12.7%
District J	49.4%	50.6%
District M	18.0%	82.0%
Average	47.4%	52.6%

TYPES OF AFTERNOON ACTIVITIES AND PARTICIPATION

In the course of the analysis attention was paid to the choice of afternoon activities on offer and participation of students in the various districts and school categories in the 2013/2014 school year compared to the preceding year. Naturally, the change does not result only from an expanding choice: progress to a higher grade, in particular from grade 4 to grade 5, is alone a significant change in the life of students. Participation in afternoon learning was examined in grade 5, primarily in respect of activities where there was a significant change in participation: thus sports, foreign language learning, talent support and remedial teaching were analysed in greater detail.

In the 2013/2014 school year there was a conspicuous and significant increase in *school-based afternoon activities* compared to the previous year. The increase in participation in the different activities is widely varied by school. Schools with a higher proportion of disadvantaged students experienced the sharpest rise in participation in foreign language learning, but there was also a significant growth in the rate of students attending remedial sessions (see Figure 1).

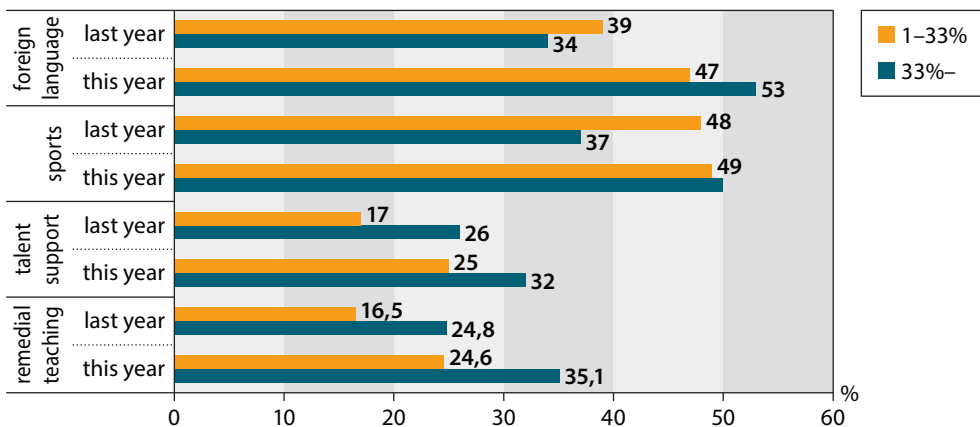


Figure 1 | Participation in certain extracurricular activities, grade 5, %, 2012/2013 and 2013/2014

At the time of the study, in the 2013/2014 school year, among the *school-based extracurricular activities* participation was highest in language learning and sports. Talent support and remedial teaching had approximately the same level of participation, roughly 30%; two-fifth of the students attended divinity, and one-fifth to art sessions. Looking at it by district, foreign language teaching was outstandingly popular in the Budapest district and students also participated in remedial teaching and art activities in above the average rates. The reverse was found in the case of divinity: participation was highest in the least-favoured district while participation

was lowest in the Budapest district. Sports showed a more even participation across the districts (see Annex, Tablet 2). Students' primary *extracurricular activity* was sport: this was typical of all of the groups, most strongly of the Budapest students (see Annex, Table 3).

There are conspicuous trends in the differences in students' *participation in school-based extracurricular activities* between the *types of institutions* set up on the basis of the composition of student population. Educational institutions having higher proportions of disadvantaged students, participation in all afternoon activities was above the average irrespective of whether the activity was talent support 'giving an opportunity' or remedial in nature (see Table 4).

Table 4 | Participation in extracurricular activities by type of educational institution classified according to student population, School-based extracurricular activities, %

	Foreign language teaching	Talent support	Divinity	Sports	Remedial teaching	Art activities
1-33%	46.7%	48.8%	34.8%	26.7%	24.6%	18.8%
33%-	53.5%	50.0%	44.3%	37.3%	35.0%	25.4%
Average	50.4%	49.5%	40.0%	32.7%	30.2%	22.4%

As regards *non-school-based extracurricular activities*, the picture is the reverse. Students of schools with a less disadvantaged student population are involved in greater numbers in non-school-based extracurricular activities including foreign language learning and remedial teaching (see Table 5)

Table 5 | Participation in extracurricular activities by type of educational institution classified according to student population, Non-school-based extracurricular activities, %

	Sports*	Remedial teaching	Talent support*	Art activities*	Foreign language teaching	Divinity
1-33%	46.5%	18.2%	18.4%	18.7%	18.1%	9.0%
33%-	38.3%	14.0%	12.5%	11.5%	11.0%	7.6%
Average	42.1%	16.1%	15.1%	14.8%	14.2%	8.2%

INSTITUTIONAL ATTITUDES AND IMPLEMENTATION

Differences in student participation are supposedly closely related to schools' attitude to implementation and the solutions they opt for. At the time of the study the attitude of heads of institutions as well as teachers to the introduction of afternoon school was rather ambivalent. While school heads were enthusiastic, the opinion of respondent teachers, parents and students was highly divided, particularly in the more backward regions (Imre 2015). The lack of enthusiasm is also explained by a lack of information and funds, which impeded implementation to a large extent.

Proportionally the largest number of school heads agreed that funds were insufficient to cover the related costs, and the time available for preparation was too short. Another problem frequently mentioned by heads was the inadequate number of classrooms available for afternoon activities. The opinion of teachers was similar: they, too, mentioned a lack of funds as the main obstacle but generally felt that shortness of time for preparation and absence of classrooms were less of a problem for them. Approximately two-fifths mentioned tensions with parents and students, and fewer indicated tensions among teachers and between the teachers and the school heads. Looking at the differences in the difficulties by district, the figures indicate that District M was faced with the highest number of difficulties, the Budapest district only perceived some of the obstacles, and in District J only the lack of funds was mentioned with above-average frequency (*see Table 6*). Schools with the biggest proportion of disadvantaged students experienced the most difficulties: besides the problem of preparation they also had to tackle internal and external tensions (Imre 2015).

Table 6 | Difficulties of implementation according to teachers' perception, by district, %

	Budapest	District J	District M	Average
Insufficient time for preparation	55.1**	42.9**	72.7**	59.2**
Difficult to find out about experience due to novelty	52.2**	43.6**	75.6**	59.8**
Scarcity of funds	81.3	86.5	86.7	85.0
Lack of classrooms	89.3**	56.0**	37.5**	59.9**
Dissent between the teachers and the school heads	25.6*	12.0*	28.9*	23.3*
Tensions among teachers	34.8	25.6	35.9	32.6
Tensions with students	35.6**	22.9**	45.4**	36.0**
Tension with parents	40.4	38.6	37.0	38.5

The question asked was the following: What kind of difficulties did you have in the course of implementation, if any?

TEACHERS' AFTERNOON ENGAGEMENT

Teachers' engagement by district and school category also reflects the differences in student participation and the variations in terms of its increase. Growing afternoon engagement of teachers is also highlighted by the research data. Comparing the figures of the reported school year with those of the previous year reveal that teachers' engagement increased primarily in study circles and secondarily in day care. Minor changes are conspicuous in all the activity types; the proportion of teachers involved in remedial teaching increased and there was a growth, albeit modest, in the proportion of teachers engaged in extracurricular language and art teaching. The greatest change occurred in conjunction with study circles and day care: the proportion of teachers organising study circles increased, as did those involved in day care and those who named other activities. The increase was steepest in the case of teachers organising study circles followed by those leading day care sessions, and to some extent, of teachers offering day care activities mentioned under the heading 'other categories' after the introduction of the new system (see Table 7).

Table 7 | Proportions of teachers engaged in afternoon activities in the 2012/2013 and 2013/2014 school year, with the rate of change, by district, %

	2012/13 school year	2013/14 school year	Change average	Budapest	District J	District M
School home activities	15.5	20.7	5.2	4.5	5.8	5.2
Day care, study room	43.8	52.0	8.2	5.7	7.1	12.6
Day care	3.6	4.0	0.4	-1.1	1.3	0.8
Remedial teaching	71.5	75.6	4.1	5.5	3.7	3.4
Study circles	47.6	59.2	11.6	6.6	6.3	22.3
Organisation of afternoon art teaching	22.4	23.5	1.1	2.3	0.6	0.8
Organisation of afternoon sports activities	22.6	26.0	3.4	-0.5	5.2	3.4
Extracurricular language teachings	10.6	11.0	0.4	-3.1	2.7	0.6
Organisation of afternoon excursions	62.6	60.8	-1.8	-1.8	-0.7	-2.6
Other	51.9	62.1	10.2			

The question asked was the following: Were you engaged in the last school year and have you been engaged in this school year in any of the following activities?

SCHOLASTIC EFFECTIVENESS

It can be supposed that there is a correlation between student effectiveness and both participation in afternoon learning and institutional conditions. Not only is the correlation detectable, it seems to have multiple facets. The correlation between participation in afternoon activities, primarily study room, and scholastic effectiveness differs by grade (Imre 2015) and also, apparently, by district and school category.

According to the figures, participation in study hall correlates with students' scholastic achievement. It is noticeable especially in the case of children of parents of lower social status that in grade 5 those who go to study room in the afternoon tend to have better achievement than their peers of the same background who don't stay at school in the afternoon or not every day (Imre 2015). Conversely, the scholastic achievement of 8th-graders who go to study room fall behind the average, and the differences become more pronounced by district (see Figure 2).

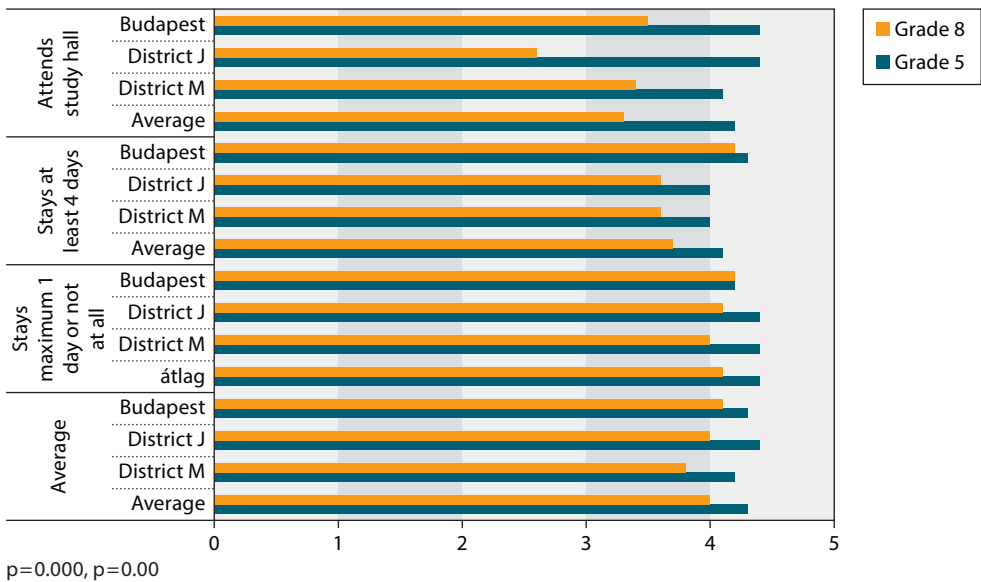


Figure 2 | Scholastic achievement at the end of the previous school year by staying for study hall by district, grades 5 and 8 (averages)

Examining it by the school categories set up for this study, at some points contradictory findings also cropped up regarding scholastic effectiveness. While in the case of schools having lower rates of disadvantaged students study room attending students in grade 5 tended to be among higher achievers in the school year investigated, in schools with larger proportions of disadvantaged students

study room was attended primarily by poor achievers students rather than those with average, or aspiring to higher achievement already in grade 5 (see Figure 3). The researchers have already found earlier that study room has a different meaning and function in grade 5 than in grade 8. The phenomenon that the function of study room might vary in the same grade in different institutions suggests differing, perhaps contradictory institutional practices in terms of interpretation and/or educational practice.

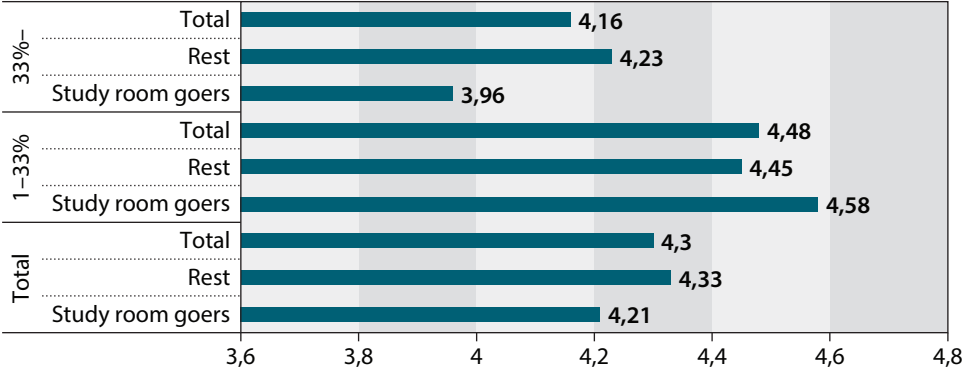
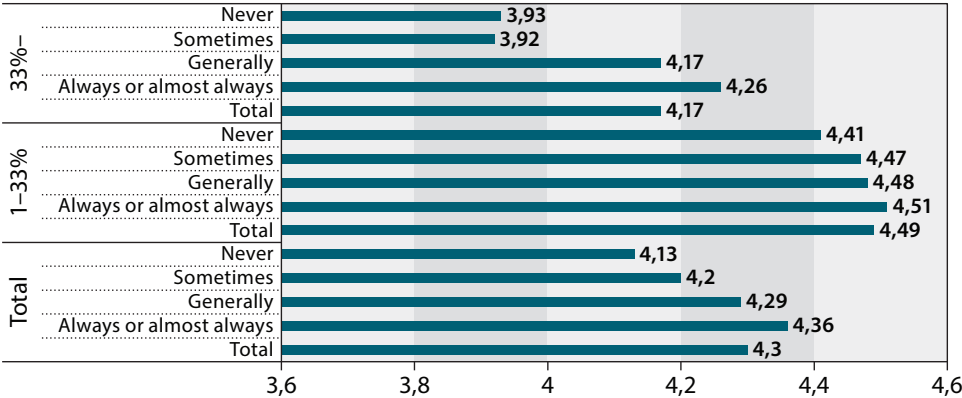


Figure 3 | Effectiveness: participation in study hall and scholastic achievement at the end of the previous school year, grade 5 (averages) (P=0.000, p=0.000)



The question asked was the following: How often does it apply to you? I discuss what happened at school with my parents.

Figure 4 | Effectiveness and parental support, grade 5 (averages) (P=0.000, p=0.000)

The impact of parental support is another facet related to students’ effectiveness in the two school categories. Our data reveal that the ‘return’ on parental support is highly varied in the two institutional categories. In schools with a relatively

lower rate of disadvantaged students parental support makes a modest impact on scholastic achievement difference. In schools with a higher proportion of disadvantaged students there is a wide gap between the achievements of students who receive frequent parental supported and those who are never or only rarely supported (see Figure 4).

SUMMARY

Our comparative time series analysis highlights a significant increase in the number of students involved in extracurricular activities, due partly to spontaneous processes but also to a great extent to the introduction of extended school until 4 p.m. The nationwide data also reveal that increase in participation in afternoon school was greater primarily in the more backward counties, in small localities.

Our findings underscore the national trends: in institutions with a larger proportion of disadvantaged students participation in afternoon activities was detectibly higher, irrespective of the type of activity.

On the other hand, the data capture the greater difficulties institutions and teachers are faced with, and the fact that more underprivileged districts and institutions encountered more challenges in the course of implementation.

While professional literature as well as our own previous experience indicate that afternoon school could contribute to student effectiveness, this contribution is not a given. Our findings suggest that in an environment of inimical local and institutional policies afternoon activities are not likely promote students' effectiveness and could even be counterproductive. Further research is needed to explore the issue in greater depths.

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ANNEX

Table 1 | Nationwide trends and changes in participation in school-based afternoon activities by activity and county in 2010 and 2014, N, %

	2010		2014		difference: 2014/2010	
	<i>day care</i>	<i>afternoon activities</i>	<i>day care</i>	<i>afternoon activities</i>	<i>day care</i>	<i>afternoon activities</i>
Bács-Kiskun	31.0	4.3	36.0	19.3	5.1	15.0
Baranya	37.5	7.6	42.6	22.4	5.2	14.8
Békés	36.9	3.8	46.5	15.2	9.6	11.4
Borsod-Abaúj-Zemplén	27.4	4.6	33.2	22.4	5.8	17.7
Budapest	47.1	6.4	52.7	14.5	5.5	8.0
Csongrád	42.8	6.1	48.5	19.3	5.8	13.3
Fejér	26.2	8.2	33.6	22.7	7.5	14.5
Győr-Moson-Sopron	37.00	6.3	42.4	16.7	5.4	10.4
Hajdú-Bihar	30.3	4.3	37.0	20.7	6.7	16.4
Heves	33.2	5.3	42.6	22.3	9.4	17.2
Jász-Nagykun-Szolnok	32.3	3.6	42.0	18.4	9.7	14.9
Komárom-Esztergom	32.7	7.4	39.5	18.5	6.8	11.0
Nógrád	29.0	4.9	32.6	24.1	3.6	19.3
Pest	35.2	4.9	42.0	14.5	6.8	9.6
Somogy	37.4	8.3	47.2	18.6	9.9	10.3
Szabolcs-Szatmár-Bereg	24.9	6.7	32.9	25.8	8.1	19.0
Tolna	39.6	2.9	45.1	12.4	5.4	9.5
Vas	40.3	4.3	49.0	17.3	8.7	13.1
Veszprém	35.9	6.2	41.9	17.8	6.0	11.7
Zala	43.2	7.4	54.5	17.2	11.3	9.9
Nationwide	35.3	5.7	42.3	18.4	7.1	12.8

Source: Institutional statistics (KIR). Edited by Tamás Híves.

Table 2 | Participation in school-based extracurricular learning by district, %

School-based	Budapest district	District J	District M	Average	Sig.
Foreign language	59.1	46.8	48.5	50.4	p=0.035
Sports	50.0	47.5	51.0	49.5	p=0.734
Divinity	16.1	45.5	49.6	40.0	p=0.000
Talent support	38.0	23.6	38.0	32.7	p=0.001
Remedial teaching	38.6	20.6	33.7	30.2	p=0.000
Art activities	28.0	16.2	24.7	22.4	p=0.012

Table 3 | Participation in non-school-based extracurricular learning by district, %

Non-school-based	Budapest district	District J	District M	Average	Sig.
Sports	50.0	43.4	35.8	42.1	p=0.022
Remedial teaching	14.6%	19.5	13.6	16.1	p=0.199
Talent support	16.1	15.7	13.9	15.1	p=0.812
Art activities	14.2	17.0	13.0	14.8	p=0.502
Foreign language	12.8	22.3	8.0	14.2	p=0.000
Divinity	2.3	13.5	7.3	8.2	p=0.001

School Climate and Educational Effectiveness

The investigation of school climate is basically rooted in organizational research and is largely based on the methods and results of group psychology and social psychology. In organizational research, the concept of organizational climate started to be widely used approximately 50 years ago (Kozma, 1985). Meanwhile, the organizational sociology approach to school – in other words, the investigation of school as an organization – was introduced in the field of education (Csepeli–Hegedűs–Kozma, 1976). Overall, school climate is to be regarded as a general feature that has tangible effects on everyday school life. Still, there are basic difficulties in giving a unified definition of school climate, no matter which theoretical or conceptual starting point is used to interpret this complex environment of learning and teaching as a set of phenomena. Beside other reasons, this is why school climate research often focuses on the investigation of dimensions or structural factors that affect schools latently (Bacskai, 2007; 2015; Balázs, 2014; Szabó, 2000; Tímár, 1994).

Educational effectiveness research have a history of several decades, and it is by no accident that attempts have been made to define periods of educational effectiveness research on the basis of the use of concepts, methods of measurements and focus of investigation (Reynolds et al., 2014, Gyökös–Szemerszki, 2014). In all events, educational effectiveness is greatly dependent on context, and several concepts of it are in use. Moreover, in recent years studies on educational effectiveness have become more complex and elaborate, and interdisciplinary models that synthesize cognitive and non-cognitive factors are used increasingly to examine the effects of schools. The studies that systematize the results of the research performed during these decades (see for example: Teddlie–Reynolds, 2000; Scheerens–Glas–Thomas, 2003) identify several factors of educational effectiveness that are linked to various dimensions of school climate, such as the learning environment, learning-centred leadership, cooperation between teachers or the involvement of the parents.

This is where the research of educational effectiveness and the research of school climate intersect. However, it is to be added that in the former the cognitive effects of schools play a decisive role, while the latter emphasizes non-cognitive aspects. Several studies employing different approaches showed that favourable school climate exercises a positive effect on students' effectiveness, which means that the factors which defines students' performance include not only their family background, social background and the social composition of their school, but the school climate or the learning environment as well (Brookover et al., 1978; Cohen et al., 2009; Dronkers-Róbert, 2003; Fényes-Pusztai, 2004; Freiberg, 1999; Griffith, 1995; Lannert, 2006; McMahon-Wernsman-Rose, 2009; Papanastasiou, C., 2008; Pusztai, 2009). Nevertheless, research results do not offer clear evidence as to the extent of such effects.

This research has its own specific antecedents. It relies on a study that identifies those characteristics of and teachers' attitude patterns in resilient primary schools (successful schools, which, regardless their unfavourable social and economic composition, are capable of producing above-average or good results) as opposed to those of vulnerable primary schools (that is, unsuccessful schools which have a relatively low socio-economic status and produce results below the average) (Széll, 2015a). It also uses a school climate study (Széll, 2015b). However, it is to be emphasized that the present analysis, utilizing existing research experience and feedback, modifies or clarifies the methodological approach used in the two studies referred to above. The present study is intended, on the basis of existing research data, to identify the link between educational effectiveness and the climate of primary schools. Its key objective therefore is to find the differences (if any) between the climates of resilient and vulnerable schools and to describe the main characteristics of such differences. The first part of the study introduces the framework of research and analysis, giving information on the databases that serve as a basis for the analysis and on the methodology of measuring school climate and educational effectiveness. After that, the study investigates the link between school climate and effectiveness, and offers a deeper analysis of the differences between the identified categories of schools (i.e. resilient and vulnerable schools).

THE FRAMEWORK OF RESEARCH AND ANALYSIS

The present analysis is based on the linked database of three data sources. The basic data source is the database of *National Assessment of Basic Competencies* (NABC), linked by year (2010–2014), enabling the examination of how schools are distributed in terms of effectiveness and social status and the analysis of other related school characteristics. These data were augmented with the information that was

provided for statistical purposes by institutions performing public education tasks (institutional statistics KIR-STAT: 2013/2014). The examination of school climate and related opinions and attitudes of teachers is based on the results of *the second wave of pedagogical panel research*¹ of factors that affect the quality of pedagogical work (2014).

The analysis is focussed on primary schools and primary school teachers, excluding 6- or 8-grade secondary grammar schools. The linked database contains data at the school level and individual's (teachers') level; the present analysis, however, relies mainly on average values broken down by school category, which method has some methodological limitations. A key limitation is that the average values calculated for each school category entail loss of information. In general, it is to be noted that if the individual data of students or teachers are described with a single piece of data in an aggregated manner the individual cases stay hidden. In addition, the average values and the estimations based on them ignore the internal composition of each school and the differences within a school. On the other hand, the school-level study broken down by school category is a justified method, which is evidenced by the fact that, as shown by research data (see for example: Balácsi et al., 2010, 2013), in Hungary the impact of family background is manifested primarily through the average social composition of schools. This means that if two students with a similar family background attend schools of different average social composition, their performance will greatly differ, while the performance of two students attending schools of similar average composition will be very similar even if their family backgrounds differ. Day and Gu (2014) also point out that the flexible and successful adaptability of teachers and schools are more dependent on the intellectual, social and organizational environment of the school as a whole than on the individual characteristics of its teachers. It is also to be noted that the present analysis studies the effectiveness and climate of two specific categories of schools, which, basically, calls for the aggregation of data.

MEASURING SCHOOL CLIMATE

The present study investigates school climate as perceived by teachers. It regards school climate as a general characteristic which has tangible effects on everyday school life; in other words, school climate is a decisive character of a school that guarantees a high quality of school life and a general sense of wellbeing through

¹ Data collection with online questionnaire surveys was performed within the framework of the priority project Social Renewal Operational Programme "21st Century School Education (Development and Coordination) Phase 2" (SROP-3.1.1-11/1-2012-0001).

observing constructive interpersonal relationships, successful cooperation, high-quality professional work and common sets of norms or values.

On the basis of the summaries of relevant technical literature, several key climate dimensions can be identified, such as the physical and emotional safety of the school; interpersonal relationships within the school; partnerships outside the school; the quality of the pedagogical environment of teaching and learning; the system of goals, norms and values; the assessment criteria of pedagogical work; forms of (professional) cooperation; the complex process of school development; and the structural and physical environment of schools (Arter, 1987; Cohen et al., 2009; Santiago, 2002; Thapa et al., 2013). Accordingly, the present study regards the following factors as of great importance with regard to measuring school climate:

- I. the quality of the interpersonal relationships and professional cooperation between actors of school life (students, parents, teachers, directors);
- II. the existence of a common set of values;
- III. the pedagogical practice and approach of the school, and
- IV. the general well-being in the school.

On the basis of these factors, school climate was measured with an aggregated climate index that shows teachers' opinions of the general atmosphere of, or well-being in, schools along those dimensions which are deemed most significant in terms of, among others, effectiveness.

The index was created with the simple summation of the variables referred to in *Table 1* and was measured on a four-grade scale (where 0 signifies "not true at all" and 3 "completely true"). The index is created only for those who answered all the 20 questions. During the analysis, the indices calculated for each climate dimension, and the aggregated climate index were transformed to a 100-grade scale, where higher points denote a more favourable opinion.²

² The reliability of the creation of the indices were tested with Cronbach's Alpha values: I. Dimension of interpersonal relationships, professional cooperation and the preparation of decisions: 0.841; II. Dimension of a common set of values: 0.821; III. Dimension of pedagogical practice: 0.840; IV. Dimension of general atmosphere): 0.833; Aggregated climate index: 0.939.

Table 1 | Variables used for the school climate variable

I. Interpersonal relationships, professional cooperation and the preparation of decisions:
In general, the relationship between teachers and children/students is good in our institution.
In most cases, parents seek teachers' professional and pedagogical opinion of their child.
In our institution, teachers regularly discuss their problems or difficulties with teaching and education.
In our institution, teachers can rely on the director's advice and support with regard to professional issues.
Our institution offers an opportunity for students to participate in making decisions that affect them.
Our institution offers an opportunity for teachers to participate in making decisions that affect them.
There is a high-level cooperation between the institution and the local community.
II. Common set of values
The staff of our institution share a common set of values with regard to education and teaching.
The atmosphere of the institution is characterized by mutual support.
In our institution, teachers regard parents as partners.
The majority of the teachers at our institution considers it important to ensure that children/students feel comfortable.
III. Pedagogical practice
In our institution, high-level educational work is being performed.
In our institution, when putting educational load on children/students, we take their individual capacities into consideration.
Teachers pay attention to situations where children/students do not perform as highly as they could.
In our institution, we can handle discipline problems effectively.
In our institution, children/students have a good attitude to learning.
In our institution, discussion with the participation of parents and teachers is an efficient solution for handling problems that may arise.
Our institution also offers adequate opportunities for children in fields other than learning (e.g. sports, music).
IV. General well-being
Teachers like working in our institution.
Children/students like attending our institution.

MEASURING EDUCATIONAL EFFECTIVENESS

To measure educational effectiveness, the site-level research databases of the National Competence Assessments between 2010 and 2014 were used.³ For the analysis, the school-level grade points average of the mathematics and reading comprehension tests performed by the 8th-grade students in a given year were used, along with the relevant information offered by site-level background questionnaires, intended to identify social or school-related factors that affect performance. Albeit test results make up only one of the indicators of the complex and actual performance of a school, they offer an insight into a significant and reliable dimension of effectiveness (Nahalka, 2015).

The educational effectiveness was calculated with an added value approach. For the purpose of calculation, linear regression models based on the ordinary least squares (OLS) method were used. Each model defines the schools' pedagogical added value (hereinafter: PAV) broken down by year for the period between 2010 and 2014 through an estimation of the average performance of schools, based on the average composition of students⁴ and on the school-level average of the students' former performance at tests of mathematics and reading comprehension^{5, 6}.

³ For details on the features of the National Assessment of Basic Competencies and of the background questionnaires for students, sites and institutions, see: *Balázsi et al. (2014)* and *Educational Authority (2015)*.

⁴ *The index calculated on the basis of the student composition of the site* aggregates the rate of students who live either among higher-than-the-average or highly unfavourable financial conditions, receive child protection allowance on a regular basis, are at risk, are entitled to school meals free of charge or at a reduced price, receive textbooks free of charge, whose parents/guardians are entitled to child-care allowance or social benefit or whose parents are unemployed or have higher education qualification. The data used for the creation of the index come from the site-level background questionnaires (filled in by heads of sites). For details on the creation of the index, see: *Educational Authority (2014, 2015)*.

⁵ The former average results of the schools are calculated on the basis of the average results of the tests taken by students of the school two years earlier, regardless of whether or not the individual students were attending the given school at that time. These values show how much the students currently attending the given school have developed in two years (*Educational Authority, 2015*).

⁶ The equation of the annual regression estimate: $\hat{y}_{it} = \alpha + \beta_1 y_{i(t-2)} + \beta_2 X_{it} + \varepsilon_i$, where \hat{y}_{it} is the estimated average results in the fields of mathematics and reading comprehension of the students of school i in year t ; $y_{i(t-2)}$ is the average results in the fields of mathematics and reading comprehension of the students of school i in year $t-2$; X_{it} is the average student composition index of school i in year t ; α , β_1 and β_2 are estimated regression coefficients; and ε_i is the residual of school i . The annual pedagogical added value (PAV) of a school equals to the difference between the actually measured (y_{it}) and the estimated (\hat{y}_{it}) school-level performance average values, that is, the non-standardized residual: $PAV_i = (y_{it} - \hat{y}_{it}) = \varepsilon_i$. The significant explanatory power of the linear models (or, in other words, the percentage-based explanatory power of the variance of test results varies within the range of 45–60% for mathematics and 60–75% for reading comprehension in the individual years.

The educational added values – used for the categorization of schools and broken down by the fields of mathematics and reading comprehension – were created as follows: on the basis of the value of year 2014 and the two valid values measured in the period from 2010 to 2013, the average of the added values identified for grade 8 in each year were calculated for each field of measurement. This means that the final PAV average results of schools entail the educational added values of minimum three years. The negative and positive values of the educational added value signify an educational deficit or an educational surplus, respectively. It is to be noted that in both fields of competence there is a strong correlation ($r=0.4-0.6$) between the absolute score points and added values calculated in the above manner.

In our opinion, the results of measurements of several years were needed as the performance of individual grades may differ significantly in the same school. Grade 8 was selected because, on the one hand, the results calculated on the basis of the test results of the 8th (highest) grade may reflect the school's effect more accurately, and, on the other hand, for 8th-grade students the test results achieved two years before were also available. The site-level educational added value (calculated broken down by competence field) calculated in this manner is considered as the collective result of a given school.

THE SCHOOL CATEGORIES SUBJECTED TO STUDY AND THEIR FEATURES

In conformity with the objective of the present study, two distinct school categories were created. The first category is that of resilient schools, that is, institutions that – regardless their socially and economically unfavourable composition – are capable of performing better than the average. The second category entails those schools of low social status where the educational added value is lower than the average.

To categorize schools, the average PAV values (calculated separately for the competence fields of mathematics and reading comprehension) and the student composition index (an indicator reflecting the social composition of schools) were used. As in the case of added values (indicators of educational effectiveness), the average value for the index reflecting a financially and socially unfavourable student composition was calculated on the basis of the index values of 3–5 years (year 2014 and at least two pieces of data from the four preceding years). Those schools which have a PAV index were categorized into quartiles on the basis of their student composition (as per financial and social conditions) to ensure that the school categories are homogeneous in terms of their social status. Obviously, the bottom quartile contains schools of the least favourable social status, while the top quartile is made up by schools of the most favourable social status. On the basis of

the calculated educational added value index, tertiles were created in the fields of mathematics and reading comprehension. The top tertile contains the schools with PAV indices higher than the average, the middle tertile entails those with average indices, while the bottom tertile is that of schools with lower-than-the-average indices.⁷ After that, the intersections of social composition, mathematics PAV and reading comprehension PAV were taken into consideration. Of the categories thus created, the present analysis focuses on two school categories and their teachers:

1. *Category of vulnerable schools*: schools of the least favourable social status (lowest quartile) that have educational added value indices lower than the average (lowest tertile) in the fields of mathematics and reading comprehension alike.
2. *Category of resilient schools*: schools of the least favourable social status (lowest quartile) that have educational added value indices higher than the average (highest tertile) in the fields of mathematics and reading comprehension alike.

The National Assessment of Basic Competencies of 2014 contains the data of 2,583 eight-grade primary schools, out of which 1,820 can be attributed an educational added value index. 5.3% of the schools which have a PAV index fall into the category of resilient schools (n=96), while 6.7% belong to the category of vulnerable schools (n=122). The database which serves basis of the present analysis – the linked database that contains the integrated data of the National Assessment of Basic Competencies, the KIR-STAT data provision and the data collected from teachers – contains 23 resilient schools and 26 vulnerable schools where PAV indices can be calculated and which employ teachers with climate indicators. This means that teachers' data are available from 24% of all resilient schools (23/96) and from 21% of all vulnerable schools (26/122), for almost one-third (173 and 156 individuals) of their teaching staff (514 and 506 individuals). Comparing the categories of resilient schools and vulnerable schools in the database of all schools that have a PAV index and those in the linked database, it can be concluded that there is no significant difference between the indicators used for the purpose of the creation of school categories (that is, between the educational added values indices and the student composition indices).⁸

⁷ This means that, in terms of effectiveness, schools were categorized into tertiles instead of quartiles. This approach was intended to ensure that the numbers of elements (data of schools and teachers) render the data suitable for analysis.

⁸ On the basis of independent two-sample t-tests ($p > 0.05$).

SCHOOL CLIMATE IN THE STUDIED SCHOOL CATEGORIES

The linked database contains the data of 2,238 teachers who teach at schools which have an educational added value and who gave information that was used for calculating a climate index. For the purpose of the present study, a key question is what kind of links or relationships can be identified between school climate (as perceived by teachers) and educational effectiveness. The term “cause-and-effect relationships” is intentionally avoided. The reason for this is that the phenomena of school climate and educational effectiveness can be described and interpreted in numerous different ways, and it is practically impossible to identify the starting point of the circular causal links where elements affect each other mutually. At the same time, the co-movement between the two phenomena and its intensity are signs, especially in cases where, besides the absolute test results, the correlation exists for the educational added values as well. The present analysis highlights this fact, as on the basis of the results it is concluded for both competence fields that the indicators that measure the various dimensions of school climate and the aggregated climate index have a weak or weak-to-medium positive correlation with the absolute test results and the educational added values. As shown by the summary of Katinka Bacskai (2015), research sheds light on two climate dimensions that contribute to the students’ educational success: (1) interpersonal relationships and (2) the system of objectives and values. This is also confirmed by the analysis results. It is to be added, however, that during the definition of the climate dimensions no attempts were made to distinguish the systems of objectives and values clearly. For example, the dimension of the educational practice of schools entails several objectives as well (e.g. individual skills development, child-centred approach); in addition, educational objectives and teachers’ competences are discussed separately at a later point.

A careful examination of the correlation coefficients of the climate dimensions and the effectiveness indicators sheds light on three important facts: (1) in the case of actual test score points, the link is stronger than in the case of educational added values; (2) in the competence field of the reading comprehension, the correlation between climate and effectiveness is stronger than in the competence field of mathematics ; and (3) among the climate dimensions, interpersonal relationships, professional cooperation and educational practices are linked to effectiveness significantly stronger than the other two dimensions are. (*Table 2*)

Table 2 | Correlation coefficients (by pairs) (r) between the individual climate dimensions and the indicators of effectiveness (N=2,238 persons)

	Absolute test results (mathematics)	PAV (mathematics)	Absolute test results (reading comprehension)	PAV (reading comprehension)
I. Relationships, cooperation	0.155**	0.107**	0.227**	0.163**
II. Common set of values	0.094**	0.070**	0.098**	0.075**
III. Educational practice	0.143**	0.091**	0.238**	0.160**
IV. General well-being	0.059**	0.034*	0.082**	0.042*
Aggregated climate index	0.187**	0.098**	0.181**	0.065**

* Significant correlation at a significance level of 0.05.

** Significant correlation at a significance level of 0.01.

Table 3 | The average score points of climate dimensions and the aggregated climate indicator, broken down by school category

	I. Relationships, cooperation		II. Common set of values		III. Educational practice		IV. General well-being		Aggregated climate index	
	Average	Variance:	Average	Variance:	Average	Variance:	Average	Variance:	Average	Variance:
Teachers of the category of resilient schools (n=173)	75.2	16.1	75.4	19.2	73.1	15.1	73.9	20.6	74.4	15.4
Teachers of the category of vulnerable schools (n=156)*	71.1	16.2	72.8	17.3	68.1	15.4	70.4	18.4	70.3	14.8
The average difference between the two categories**	4.1	–	2.6	–	5.0	–	3.5	–	3.1	–
Teachers of all schools subjected to analysis (N=2,238)	75.9	16.1	77.0	17.2	74.7	14.4	76.5	18.2	75.8	14.4

* Differ significantly from the average.

** The significant differences between the two school categories are marked in bold (independent two-sample t-tests, p<0.05)

The results clearly show that there is a considerable difference in how teachers of resilient and vulnerable schools – the schools examined by the present study – perceive school climate. This difference is identified in those very dimensions that exhibit the strongest correlation with effectiveness. In other words, teachers of the vulnerable schools (if compared to teachers of resilient schools) perceive the climate of their schools as less favourable along all the four dimensions. This difference is most evident in the dimensions of interpersonal relationships, professional cooperation, the preparation of decisions and educational practices. (*Table 3*)

SUMMARY

The present study investigates the link between school climate and educational effectiveness. The analysis focuses on the successful (resilient) primary schools of a student composition that, in terms of social and financial factors, is most disadvantaged and the unsuccessful (vulnerable) primary schools of a similar student composition. Effectiveness and success are measured on the basis of the results of the National Assessment of Basic Competencies.

The research results indicate a clear correlation between school climate (as perceived by teachers) and educational effectiveness. Firstly, this fact clearly indicates that there is a substantial correlation between the indicators of effectiveness (absolute test results, PVA) and the climate indicator created by the researchers. Secondly, it confirms that teachers employed by resilient schools perceive the climate of their schools as markedly more favourable – a fact mainly reflected by a favourable opinion of relationships, cooperation and educational practices. The link between climate and effectiveness is stronger in the case of actual test score points and in the competence field of reading comprehension. It is to be added, however, that the correlation is not very strong with any of the effectiveness indicators; still, the correlation is to be regarded as a relevant sign.

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ANIKÓ FEHÉRVÁRI

Educational Effectiveness and Disadvantage

INTRODUCTION

Educational effectiveness research (EER) looks back upon a history of half a century. Its beginnings are connected to a survey conducted by Coleman et al (1966) to explore the effect of schools on students' performance. Numerous theories and research have since addressed the issue of effectiveness and its characteristic features. There are several approaches to effectiveness. According to its broadest concept a school is effective if it achieves the goals it has set for itself (Madaus et al., 1980), which means at the same time that these goals can be multifarious; in other words, a school can be effective in a whole host of areas. Apart from the obvious academic and educational goals other community and economic expectations may arise as contributors to effectiveness (Townsend, 1994). Therefore, a common feature of effectiveness studies is that they are multifaceted and strive to capture school impacts in a more intricate fashion and in greater detail. Initially effectiveness research handled student and teacher effectiveness separately. In the past decade, however, linking the two has become a dominant trend, as have simultaneous studies of effectiveness in cognitive and non-cognitive areas (Creemers et al, 2010, De Maeyer et al, 2010). According to De Maeyer, the choice of what (cognitive and non-cognitive characteristics) we study is primarily influenced by what we consider to be the main objective of education, the social task of the school.

Over this half a century EER has gone through phases based on the research goals and focuses or models of effectiveness (Reynolds et al 2011, Gyökös-Szemerszki, 2014). The first phase was marked by Coleman et al (e.g. Jencks and Bernstein). The second phase emerged in the 1980s with multilevel methodologies and methodologically sophisticated studies. Research in the early-to-mid-'90s explored the differential

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effects of schools. EER in the late '90s was marked by internationalisation and was increasingly linked to school development (Reynolds et al, 2011).

The fifth phase, currently in evidence, is characterised by an increasing number of systematising and synthesising models and methodology works. They expand in space and time, i.e. they take into consideration research output from a growing number of countries and over a greater time span. This has also resulted in more complex models and descriptions and a connection of previously separate research topics, research teams and disciplines (e.g. sociology, psychology, management science) and their methodologies. This expansion is conspicuous in terms of the subject matter of research. While earlier EER was focused on the effectiveness of schools and public education, in the wake of today's educational expansion education in early childhood as well as higher education have also become subjects to research. Another feature of this phase is its dynamic perspective handling the micro (students, teachers), meso (school) and macro (system) levels together.

Two of the systematising studies published almost at the same time should be singled out. Based on twenty years of research findings Teddlie and Reynolds (2000) determined the following nine factors that influence school effectiveness:

- Effective leadership
- Effective teaching
- Learning support
- Positive school culture
- Sufficiently high expectations of everybody (students and teachers)
- Emphasis on students' rights and responsibility
- Ongoing monitoring of all levels (school, classroom, student)
- School based professional development of school staff
- Parents' involvement

A Dutch analysis also approached from the widest possible basis and relied on American, international (OECD and IEA studies) and Dutch findings in an attempt to explore the dimensions of educational effectiveness. *Scheerens* et al (2003) found the following to be the main factors of effectiveness:

- Achievement orientation, high expectations (students and teachers)
- Learning-centred leadership
- Consensus and cohesion among staff (cooperation among teachers)
- Quality of educational content, opportunity to learn (methods, textbooks, extracurricular activities, motivation)
- School climate
- Institutional evaluative potential
- Parental participation (open school)
- Classroom climate

- Effective learning time management
- Structured instruction: differentiation, reinforcement and feedback.

Synthesising research is supplemented by meta-analyses. They not only systematise knowledge and findings gathered so far but also highlight the extent of the effect of the various factors. Meta-analysis therefore serves a dual purpose: it reconstructs the previously acquired knowledge, and also allows for the formulation of new research questions.

Scheerens et al (2013) conducted a meta-analysis of the associations between school effectiveness enhancing factors and student outcome variables. The 155 original educational effectiveness studies analysed were carried out between 1985 and 2005. Based on the meta-analysis numerical effect sizes (Fischer's Z coefficients) were calculated. Effect sizes were highest in the case of the curriculum related factors, curriculum quality and teaching time followed school climate and achievement orientation, and parental participation. Of the 13 factors examined¹ differentiation, cooperation among staff and school management were found to be the least related to effectiveness. However, it is to be noted that the researchers also calculated the numerical effect sizes for the USA and the Netherlands separately and found country-specific characteristics. For example in the United States differentiation and staff cohesion seems to have a stronger impact on effectiveness than in the Netherlands, where achievement orientation is more prominent. Another important finding was that taking students' family backgrounds into consideration moderated the effect sizes.

Apart from *Scheerens, Hattie (2009, 2012, 2013)* as well as *Creemers and Kyriakides (2008)*² also carried out meta-analyses of educational effectiveness. Both studies gave rise to similar findings although the strengths of effect were different. In their paper on the methodology of meta-analysis *Creemers and Kyriakides (2012)* point out that analyses can lead to different results. So while none of the three studies mentioned above attributed great importance to school leadership, other researchers found it was of significance (*Robinson et al, 2008*). The differences in the output of meta-analyses are explained by two reasons: one reason is the selection of studies for meta-analyses; the other is the differences in methodology (i.e. different encoding of variables).

In our study we attempt to explore the dimensions of educational effectiveness in schools with disadvantaged student populations through the findings of a

¹ Cohesion among teachers, school climate, institutional evaluation/monitoring, curriculum quality, home assignments, instruction time, parental participation, achievement orientation, school management, differentiation.

² A total of 12 factors were analysed.

Hungarian research project. It is important to emphasize disadvantage because in Hungary the connection between family background and student achievement is particularly strong (Andor – Liskó, 2000; Balázsi et al, 2014; Kertesi – Kézdi, 2010), and research also revealed that the school increases the differences rooted in the social background (Balázsi – Horváth, 2011).

ABOUT THE RESEARCH

This study basically relies on the empirical data of a panel survey whose first phase took place between 2006 and 2008 under the title of In-service teacher training in integration programmes³. The applicant institutions (a total of 147) belonged to three groups⁴, each group aiming to implement integrated education of multiply disadvantaged and Roma students and to develop institutions with such students. Several papers were published about the findings (Liskó – Fehérvári, 2008; Liskó, 2008). The second phase of the survey took place in the spring of 2014 and involved the same panel with expanded research tools and methodology. The outputs of this phase were also published (Fehérvári – Tomasz, 2015). The present study connects the school-level database of the 2014 survey with the site-level data of the 2014 National Assessment of Basic Competencies in grade 8; the methodology was described by Széll (2015). The integration of data makes it possible to calculate from the mathematics and reading comprehension scores the educational value added in the school. The main objective of our analysis was to find out what school characteristics value added is related to, and what makes one school more effective than another. Effectiveness in this context does not mean students' achievement alone; rather it is the school's value added which is an index adjusted by the student's earlier test score and the composition of the school's body of students. The two areas of measurement – mathematics and reading comprehension – are handled separately as their correlations with the different factors are different. The school-related factors examined comprise staff characteristics, participation of the school in development projects, external relations, and the school head's view on which areas are underfunded within the school.

³ The survey was supported by the non-profit company Sulinova Kht. The researchers were Ilona Liskó †, Gábor Havas and Gábor Tomasz.

⁴ HRDOP 2.1.5 – Integrated education of students with multiple disadvantages within the school – 99 schools
 HRDOP 2.1.7 – Reduction of segregation among schools – 10 schools
 HRDOP 2.1.8 – Development of schools in single-school localities with a majority of students with multiple disadvantages – 38 schools.

FINDINGS

Figure 1 presents the composition of the student body the investigated schools. The result of variance analysis clearly indicates a very significant difference from the nationwide average. The family background of the students in the investigated schools is five times worse, and the composition of the student body is nine times worse than the national average.

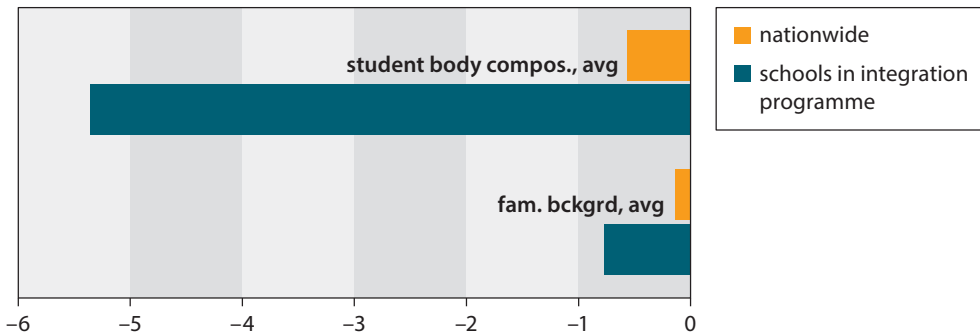


Figure 1 | Composition of the student body and students' family background, 2014

Earlier studies found that schools where there is a high rate of (multiply) disadvantaged students essentially don't have less qualified or experienced teachers but find it more difficult to fill the gaps in their staff and are lacking more teachers, consequently they have a poorer supply of specialised teachers (Varga, 2009; Fehérvári, 2015). This is typical for the schools analysed: the number of unfilled teaching positions is far above the nationwide average and missing teachers often cause serious problems, and some of the subjects have to be covered by teachers whose major is in a different discipline. There is no difference in the educational value added of mathematics and reading comprehension in respect of teachers' professional qualifications (the rate of university graduates was analysed); conversely, there is a significant difference between the value added of mathematics and reading comprehension when considering missing staff, supply of specialised teachers and teaching assistants. According to the result of variance analysis the school where all teaching positions are filled, subjects are 100% covered by the relevant specialised teachers, and there are teaching assistants who help teachers' work represent higher value added. It is also conspicuous that it is the inappropriate supply of specialised teachers that has the strongest negative impact on value added. The difference between the two tested areas is also demonstrable: while mathematics appears to affect value added more positively, the effect of reading comprehension is mainly on the negative side.

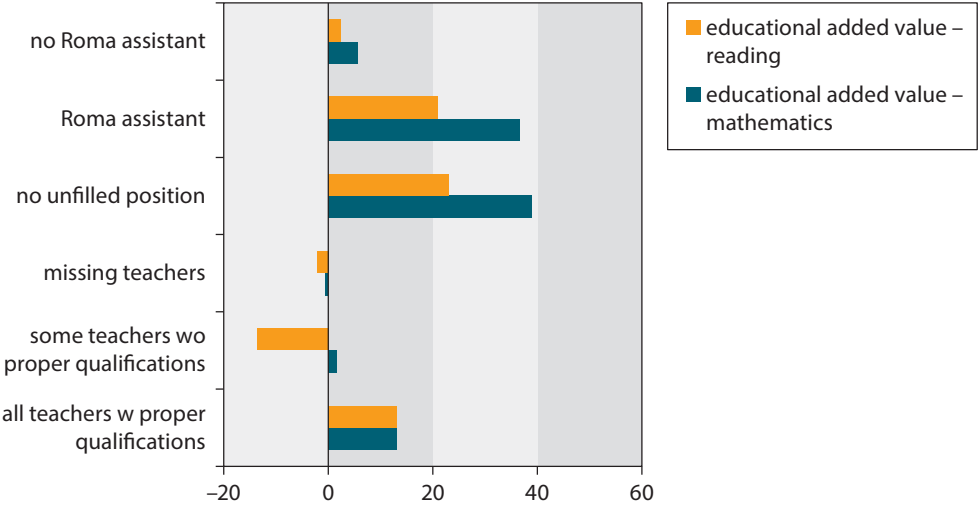


Figure 2 | Staff characteristics of schools, 2014

Schools’ external relations and embeddedness in the local community do not tend to be prominent issues in EER. Researchers generally look at parental involvement in this regard. However, when disadvantage is at the core of the study schools’ relationships are also important to consider primarily because of social welfare and employment both of which can have an important role in preventing social exclusion and extreme poverty. These sectors and their cooperation with education also play a part in the prevention of early school leaving and attrition. The questionnaire designed for school heads tried to explore several of these relationships and their intensity. We found that there was no correlation at all between value added and NGOs, family assistance service, non-school-based study halls, and professional and pedagogical assistance services. There are two exceptions, however. Schools that interact with the municipality and child welfare services on a daily basis are more effective than those that do not have such a regular interaction. The mechanism in the two areas measured is the same as described above: the effect is more positive on the mathematics related results and more negative on the reading comprehension results. In other words, schools that cooperate more closely with local organisations are more effective than those that don’t. A school appears as part of a complex system of services. It is important to note that the professional support system seems to have no detectable impact.⁵

⁵ It is to be noted that the professional support system is currently being revamped.

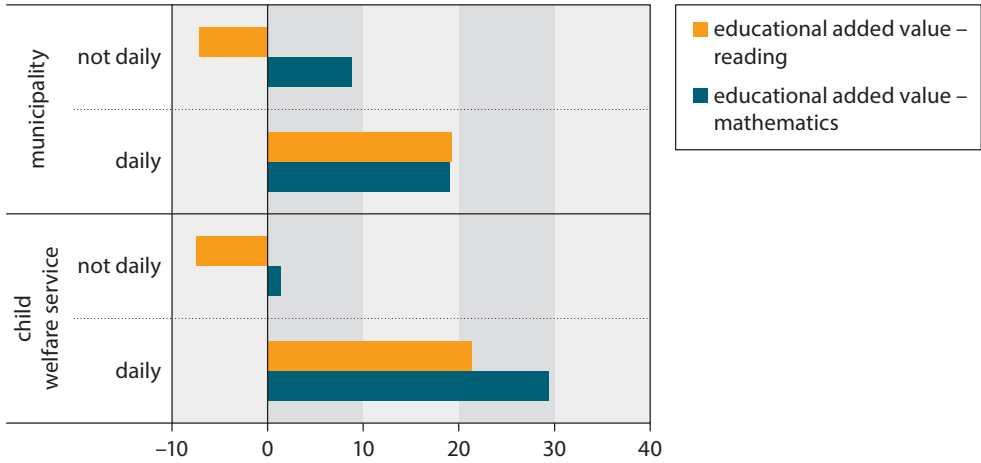


Figure 3 | Schools' external relations, 2014

A spirit level of a school's innovative capabilities is its successful application for grants in development schemes. Two types of development programmes were investigated: the SROP projects deployed over the past few years which were aimed at either educational content or infrastructure development; and other central initiatives that funded mainly enrichment type of extracurricular activities (Útravaló – MACIKA Bursary Programme, Eco School, Talent Point). Participation in such projects have a conspicuous positive effect on the school's value added in both mathematics and reading comprehension. There is also evidence that programmes enriching school services have a greater impact on effectiveness.

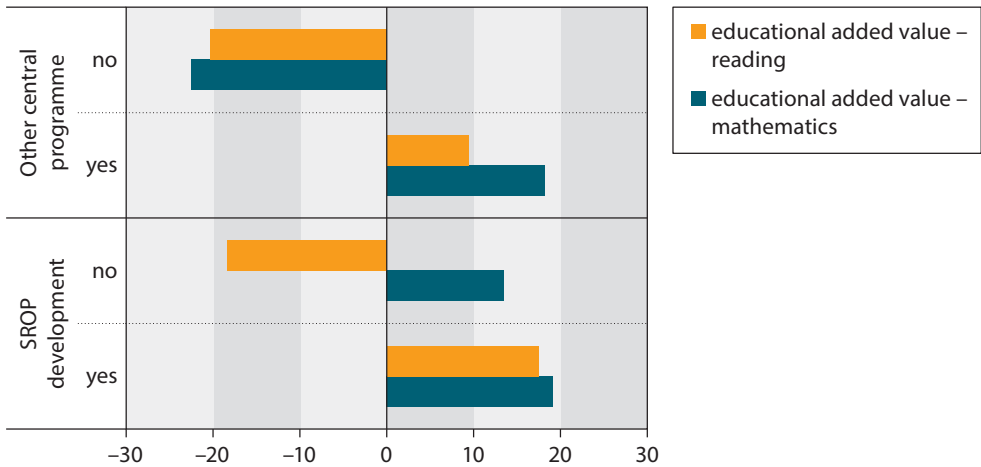


Figure 4 | Schools' participation in development programmes, 2014

As we had no data about the schools’ budget we asked the school heads which areas they thought to be underfunded⁶. Two of the eight areas mentioned have a significant correlation with value added. One has already been mentioned, and it has been found that enrichment programmes, i.e. the expansion of services have a positive effect on value added. Understandably, scarcity of funds in this area has a negative impact. The other important factor is teachers’ professionalism. Schools that have sufficient funds to finance continuing training of their teachers achieve a higher effectiveness score than schools where this area is underfunded. The two areas measured behave in a similar way in this respect but the difference in the mathematics value added is greater than on the reading comprehension side.

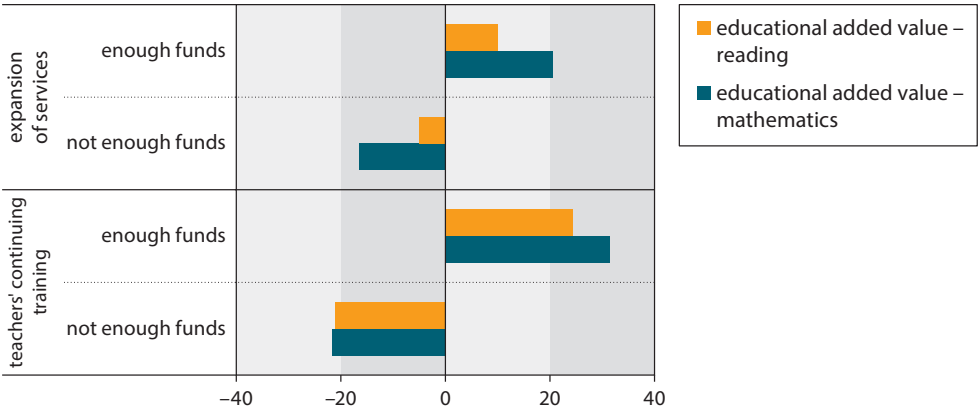


Figure 5 | Underfunded areas in the school as seen by school heads, 2014

We wanted to examine the combined effect of the factors detailed above, and to identify the factor that has the strongest influence on value added. Two linear regression models were prepared, one for the mathematics value added and one for the reading comprehension value added. The results were similar. Only one factor remained significant in the models: teachers’ continuing training. This means that in schools where funds are insufficient to ensure teachers’ in-service training there is a greater likelihood that the value of educational value added will be negative compared to schools that are capable of funding continuing training. Both models have medium explanatory power; the beta coefficient is slightly higher for the mathematics value added than in the reading comprehension side.

⁶ Eight areas were mentioned: basic functioning, building renovations, installations, technical upgrading, expansion of the number of services, enhancement of the standard of services, teachers’ in-service training, teachers’ premium, and students’ social support. There was an ‘Other’ category, where school heads could add other areas.

Table 1 | Regression model of mathematics and reading comprehension value added

	Variable	B	Sig.	R2
Mathematics	Teachers' continuing training	-55.4	.014	29.5
Reading comprehension	Teachers' continuing training	-49.5	.007	29.2

CONCLUSION

In our study on educational effectiveness we presented a school category where the student population consists mainly of disadvantaged and Roma students. By linking the research and administrative databases we sought answers to the question what school factors influenced educational effectiveness. This was measured by value added calculated from the site-level National Assessment of Basic Competencies data.

Similarly to other effectiveness research, this study has not found a significant correlation between educational effectiveness and the school's material assets. The effect of its staff related factors is much stronger. For the category of schools explored in this study the absence of conditions is particularly important: lack of teachers with the required specialisation and absence of teaching assistants have a negative impact on value added. Scarcity of funds also has a negative effect which is experienced most sorely in teachers' continuing training and the expansion of services. Value added is increased by the school's intensive communication with local institutions and organisations active in other areas (concerning students), and participation in central development projects, particularly extracurricular activities, also has a positive effect.

Returning to international literature, our analyses highlighted professional development as the variable most closely correlated to educational effectiveness but the quality of the educational content also appeared through the positive effect on extracurricular activities. The school's relations and its embeddedness in the local community emerge as a new factor possibly related to the fact that our study addressed the effectiveness of schools with a disadvantaged student population.

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MARIANNA SZEMERSZKI

Access and Equity – Disadvantaged Students in Higher Education

INTRODUCTION

The principles of equity access to higher education and the social role of higher education is emphasized in numerous international documents including, *inter alia*, UNESCO's 1998 World Declaration (World Declaration on Higher Education for the Twenty-first Century, 1998) setting forth access based on merit and the promotion of equal opportunities. The social dimension of tertiary education also plays a special part in the Bologna process where this topic has been kept on the agenda since the 2001 EHEA Ministerial Conference in Prague and has regularly been a priority issue in the focus of debates and talks since¹. Equal opportunities and equity matter not only in conjunction with access; they are important for the entire duration of higher education studies. Many experts and researchers agree that in the wake of expanded opportunities of access today it is not so much admission to, but remaining in, higher education and the quality stages of the higher educational career path (such as, for instance, participation in research and international mobility schemes), and successful passage to the labour market that are the real divide. Therefore, educational sociology must address these issues.

In Hungary, the number of students in higher education steadily increased from the early 1990s. The first phase took place between 1990 and 1995, when the number of student in higher education doubled, then by the mid-2000s it quadrupled. The growth was due largely to non-full-time programmes which often provided a second chance to more mature persons to pursue studies in higher education. Since 2006 there has been a gradual shrinkage in student headcounts primarily because

¹ Partly as a main topic of the Ministerial Conferences the results of which are published in the communiqués, and partly at the Bologna seminars focussed specifically on this issue.

of demographics and the drop in the number of students in part-time programmes. Nevertheless, the current number of students is still triple the early 1990s headcount.

The expansion of higher education went hand in hand with an increase in the diversity of institutions, programmes and heterogeneity of the student population in numerous countries around the world including Hungary. In modern higher education this diversification opened new dimensions of inequalities. Because of the robust expansion of student numbers the fault line is conspicuous not only at the access stage but even more prominently between levels of education, types and fields of programmes (Koucký – Bartušek – Kovařovic, 2009). At the same time expansion gave a chance to those who were earlier underrepresented or did not participate in higher education. Some educational sociology research start from the position that mass education necessarily results in diminishing inequality of opportunities, but many researchers point out that expansion does not do away with inequalities; instead selection takes different forms and appears at a later stage (Shavit-Blossfeld, 1993; Shavit et al., 2007).

Hungarian researchers also explored the issue at the time of higher educational expansion. Andor (1999) presented selective differences at the admission stage in the hierarchy of college versus university and institutional prestige. Róbert (2000; 2003) focused on inequalities of the transition from secondary to tertiary education, inter alia inequalities related to admission to marketable training programmes. Research also draws attention to the fact that in many respects progress to tertiary education is essentially decided by the choice of secondary school: due to the considerable heterogeneity of the secondary educational system students have unequal opportunities to proceed to higher education. The admission system is not the only source of unequal opportunities of access. It is also conspicuous that disadvantaged student groups, notably certain disadvantaged student groups, exclude themselves from higher education by not applying. Therefore measures providing incentives to specific groups to apply and extra opportunity in the admission procedure are important. Hungary introduced such measures in 2007 and adds extra points to the admission score of members of three designated groups (socially disadvantaged youth, persons with disabilities, and parents on childcare benefit).

METHODOLOGICAL BACKGROUND AND DATA

With the exception of postgraduate specialist training courses and PhD programmes the Hungarian higher education system applies a nationwide uniform admission system. Applications can be submitted twice a year by designated deadlines in the framework of a central admission procedure. In the case of programmes building on the secondary school leaving examination higher education institutions have no

power of decision except for a few special fields, for instance the arts. In the second tier of the three-tier training system institutions determine the input requirements of master's courses.

This central procedure makes it possible that researchers have access to the data appearing in the procedure in an anonymised database. In this study we rely on this database and explore the chances certain disadvantaged groups had upon application and upon admission to the different forms of training programmes available for secondary school graduates in September 2015, and how the extra points helped them to be admitted. The analysis focused on the disadvantaged groups of which the database contained data, in particular, socially disadvantaged applicants and applicants with disabilities² made use of the opportunity of extra points.³ Of course other disadvantaged groups can also be identified besides those chosen for analysis, for example young people living in small localities, who, given their nationwide proportion, are underrepresented not only in those admitted to, but also in those applying for, higher education, and can be characterised by a different application strategy (Kiss, 2008). Another group is that of young people from disadvantaged micro-regions who are also characterised by a strong self-selection and tend to opt for lower prestige courses and training programmes (Kiss, 2013). In their case, however, the disadvantage is not only personal but also regional. Young Roma are also disadvantaged but because of statutory provisions there is no data collection about them in the higher education application procedure, therefore they do not feature as a separate group in this analysis. Nevertheless, owing to their disadvantaged position most of them doubtless appear in the socially disadvantaged group.

SIZE AND COMPOSITION OF THE GROUPS

In 2015 approximately 2.6% of the applicants for courses based on secondary school leaving examination (SSLE) were disadvantaged, a total of 2162. The group of persons

² The analysis did not include those with young children who, given their sociological composition (being mostly women and typically more mature in terms of age) and training preferences, constitute a group in their own right.

³ Obviously it cannot be stated that these groups only include those who indicated their special position in the application procedure. Very likely there are applicants who do not want to avail themselves of the opportunity to be accorded extra points. On the other hand, indicating the need for extra points entitles the young people to other preferences as well so it is in their interest to check mark it.

with disabilities comprised 1.2% of applicants or 972 persons.⁴ There is some overlap between the two groups but only 22 applicants check marked both categories.

Public education statistics can give an idea of how big the basis of these two groups is⁵. It transpires from the available data that annually approximately 10,000 socially disadvantaged students pass the SSLE while in the database of applicants for higher education only 3002 graduated in 2014 and requested extra points under the title of being disadvantaged, and in 2015 the same number was 1639. The same applies to persons with disabilities: the rate of applicants is far below the rate of SEN students graduating from secondary schools having passed the SSLE⁶. This suggests that there are substantial reserves in both populations.

The demographics of the two groups are slightly different. Socially disadvantaged applicants tend to be considerably younger than the average tertiary education applicant. This is not by chance as one of the conditions for granting extra points is the applicant’s age, which should be no more than 25. However, the overwhelming majority, 92%, are no more than 21 years of age, which is a clear indication that most of them apply for higher education in the year they take the SSLE or immediately after. This means that public education has a crucial role in incentivising disadvantaged students to continue their studies in higher education.

Table 1 | Composition of the two groups by year of the SSLE (2015)*

Year of SSLE		In the year of application	One year earlier	Two years earlier	Three years earlier	Four years earlier	More than four years earlier
2015	Disadvantaged applicants	75.8	10.3	7.3	3.7	1.8	1.1
	Applicants with disabilities	47.6	11.7	9.9	6.5	5.7	18.6
	Total applicants	49.6	10.7	7.5	5.5	4.3	22.4

* Among those who applied for undergraduate or one-tier programmes or post-secondary non-degree vocational training courses as a first choice.

⁴ A total of 84.7 thousand young people applied for courses based on secondary school leaving examination (SSLE) that started in September 2015. It is to be noted that while there has been no significant change in the rate of applicants with disabilities since 2007 the rate of disadvantaged applicants, which in some years was 6-7%, has dropped significantly as a result of legislative changes.

⁵ Unfortunately the two databases cannot be linked at the level of individuals.

⁶ The number of SEN students graduating from grammar schools is approximately 500 and from vocational secondary schools 1000. Added to this group is approximately the same number of students with learning, behavioural and adaptive disorders. In contrast, there were 463 persons in the database who graduated from secondary school in 2015 and requested extra points under this title.

A common feature of both groups is that they acquire the SSLE certificate in full-time education in grammar schools. This is typical not only for these groups but also for the majority of those who intend to study further in tertiary education. On a nationwide level almost two-thirds of the applicants are grammar school graduates while the rate of students acquiring their SSLE certificate in grammar schools is approximately 53%. This highlights the fact that grammar school graduates are more likely to apply for higher education. The two groups are in a special position in that the rate of applicants graduating from vocational secondary schools is somewhat higher than the nationwide average albeit the difference is only three and five percentage points respectively. Yet however small, this difference contributes to the lower rates of applicants with advanced level SSLE in one or more subjects, and/or have a language proficiency certificate among the applicants with disabilities and the socially disadvantaged youth alike (see Figure 1). In the Hungarian higher education admission procedure these two achievements are proof of knowledge that can be converted to additional points, which is a major factor in whether the applicant is admitted to the desired programme.⁷

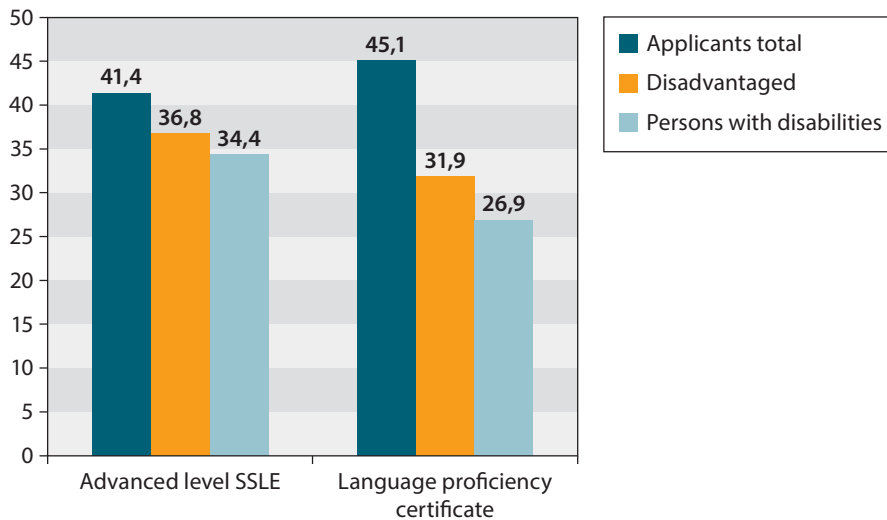


Figure 1 | Studies related extra score supporting admission (2015)*

* Among those who applied for undergraduate or one-tier programmes or post-secondary non-degree vocational training courses as a first choice.

⁷ In the application procedure 400+100 points can be acquired of which 100 are extra points are awarded for extra scholastic achievement (e.g. competition results, advanced level SSLE, language proficiency certificate), or vocational qualification, or as extra points as preferential treatment. Acquiring extra points one way or another is highly necessary as the basic score awarded for scholastic achievement and the SSLE results is not sufficient for admission particularly to some popular programmes.

While applicants with disabilities do not seem to have common territorial or regional characteristics socially disadvantaged applicants typically also struggle with locality-related disadvantages in addition to individual ones. This results in differences by type of locality (51.1% of them live in villages compared to the overall average of 27.7% among applicants), and territorially uneven distribution. In 2015 approximately 44% of applicants entitled to extra points due to their social disadvantaged status came from three counties: Szabolcs-Szatmár-Bereg, Hajdú-Bihar and Borsod-Abaúj-Zemplén, and the rate was similar in previous years. Assessments prepared earlier also pointed out that the distribution of disadvantaged and multiply disadvantaged applicants by place of residence is by no means homogeneous and follows the patterns of economic development in the country (Szemerszki, 2010; Szemerszki, 2012; Hegedűs, 2015). The current data also reveal that due to the unevenness of territorial distribution three regions contributed more than two-thirds of applicants (see Figure 2). In the regions where the rate of disadvantaged applicants is highest the locality-related disadvantages are likewise greater: 55–65% of applicants with disadvantages are village dwellers and no more than one-tenth of those applicants live in the county seats.

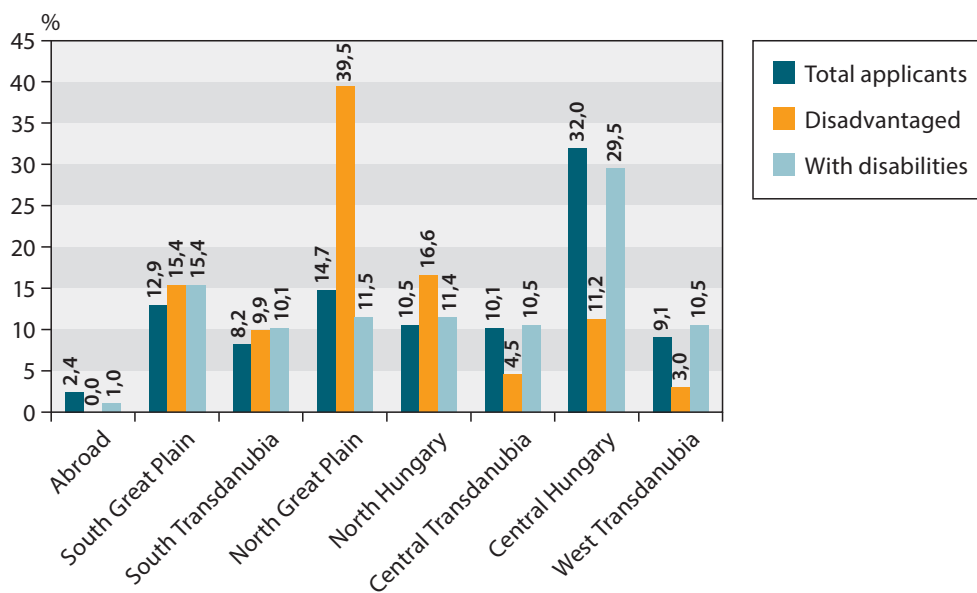


Figure 2 | Regional distribution of applicants (2015)*

* Among those who applied for undergraduate or one-tier programmes or post-secondary non-degree vocational training courses as a first choice.

APPLICATION STRATEGIES AND ADMISSION

Three-quarters of students pursuing post-secondary studies opt for full-time training as a first choice, and 85% apply for courses subsidised by the state. Compared to this average, members of the two groups investigated choose state subsidised training programmes in higher rates, particularly socially disadvantaged applicants where only 3% indicated self-financed programmes as a first choice and 78% indicated state grant based courses for all of their choices.⁸ (Nationwide data show that 15% of all applicants indicate a tuition fee based course even as their first choice and only 53% insisted exclusively on state financed training). Applicants with disabilities also show greater preference to state funded programmes than the average (58% indicated only this format) but for them this is a less important consideration, as is admission to a full-time programme. By contrast, disadvantaged applicants favour full-time studies almost exclusively – a fact that is probably related to their younger age and to the fact that the great majority of social benefits available in higher education (residence hall, social grants) are available almost exclusively for full-time students.

As the number of full-time state subsidised places is limited this is where applicants have the least chance to be admitted; moreover, as their academic score tends to be somewhat lower, applicants in both groups must carefully consider their choices of programmes and institution. They must strive to select courses where they stand a greater chance of admission, and this steers them towards certain forms and field of training. They apply for shorter post-secondary non-degree vocational training offered by higher education institutions in proportions well above the average, and proportionally far fewer opt for single-tier programmes. This strategy enhances their chances considerably because generally fewer applicants make tertiary non-degree vocational training courses their first choice than the admissible numbers. On the other hand, single-tier programmes with long durations (for example degree courses in law, medicine and veterinary science) are one and a half times overapplied for even as a first choice.

Selection of the field of training is another important factor enhancing chances. As a result, disadvantaged applicants are overrepresented in agricultural programmes, teacher training as well as in public administration, police and military courses, mainly in the shorter duration majors offered in these fields. The programme choices of applicants with disabilities are obviously driven by other considerations as well: because of the special aptitude requirements they are underrepresented in

⁸ In all 10 combinations can be chosen considering five parameters (place of training, major, type of programme, work schedule and financing).

public administration, police and military courses as well as in teacher training, and tend to favour liberal arts and social science (see Figure 3).

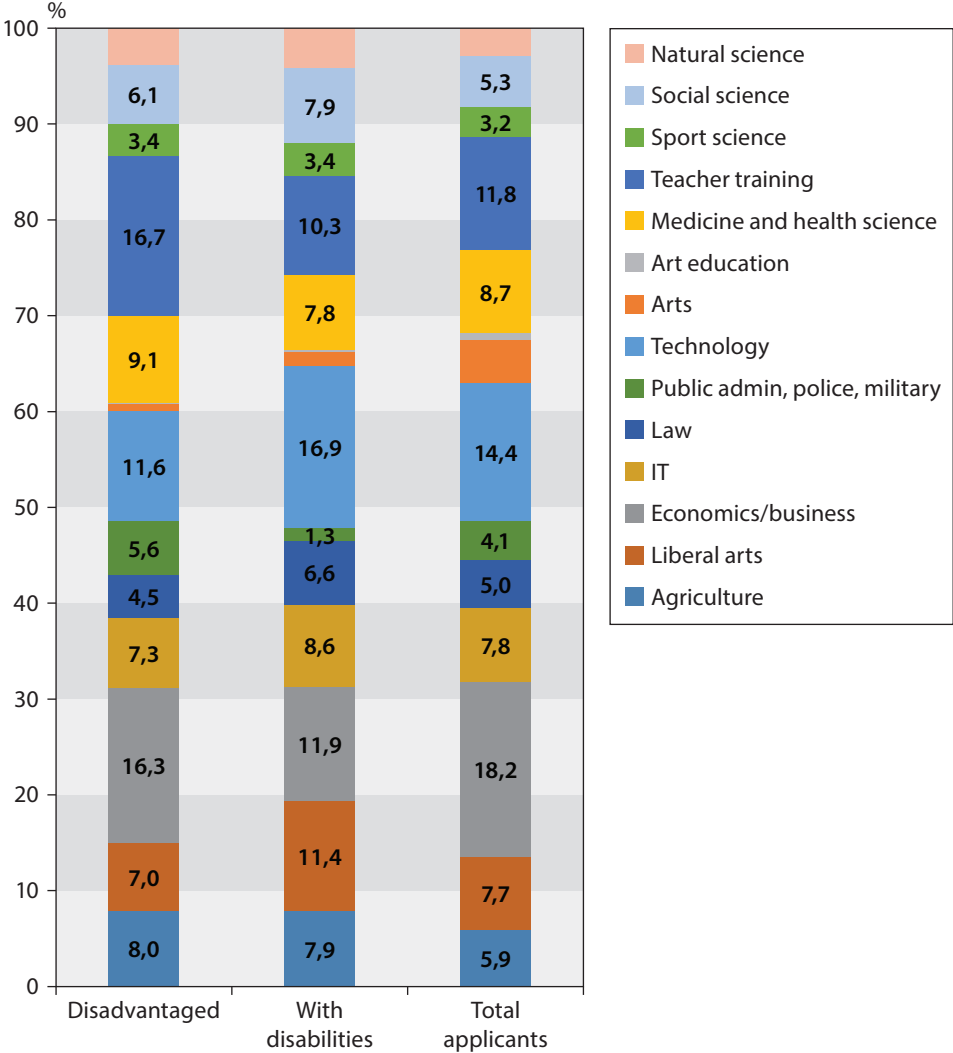


Figure 3 | Preferences by field of training (2015)*

* Among those who applied for undergraduate or one-tier programmes or post-secondary non-degree vocational training courses as a first choice.

This suggests that socially disadvantaged applicants’ choice of training is greatly influenced by their financial capabilities, narrowing their options: they tend to apply for state funded courses, and mainly in areas and of forms where they see a realistic chance for admission. They only choose tuition fee based courses if they

are forced by their preference of a particular discipline or area of training. These considerations are less marked in the group of applicants with disabilities, in their case special considerations related to their disabilities dominate.

An appropriate application strategy and the extra points system together account for average or somewhat better admission rates in both groups: in 2015 73% of the socially disadvantaged applicants and 71% of the applicants with disabilities were admitted to higher education (naturally, not necessarily to the first-choice place). The nationwide average for the levels examined was 69%.

However, as has been indicated above, it is not just admission to higher education but remaining in and successful graduation that provides real and long-term opportunities to members of these student groups. Consequently, measures improving the opportunity for admission must go hand in hand with measures that help keep students who start their studies with various forms of disadvantages in higher education and promote their graduation and subsequent entry in the labour market. Research proves that the initial stage of studies has a particularly important effect on continued successful studies (McCulloch, 2014), it is mostly in the first year of studies that young people entering higher education are faced with the factors, shortcomings and disadvantages they have brought with them and which hamper or jeopardize their progress in their new environment.

In this respect, the programme of the National Conference of Student Unions (NCSU) is an important initiative. It offers mentoring to socially disadvantaged students in the first year of their studies. In the context of the NCSU Mentor Programme students at higher echelons in their studies mentor disadvantaged freshmen (over 1000 a year). In addition to assisting with their studies, they help them adapt to university or college life.

While mentoring does not involve financial assistance there are other support schemes in Hungarian higher education contingent on the parents' financial conditions. This is important because in Hungary parents tend to shoulder a large portion of the costs of their children's full-time tertiary studies. This type of cost sharing does not promote equal opportunities because young people whose parents cannot afford to finance their children's studies will be left out of higher education or will have to work while studying. Work *per se* is not necessarily a disadvantage; in fact, research findings indicate that work in an area related to studies can actually make it easier to find a job. This is not so true for purely subsistence driven work, which could cause a serious shortage of time and sometimes divert students' energies from their studies (Nyüsti, 2014, Veroszta, 2014). Despite these diverse forms of support social background can still affect higher educational careers: in more advanced years and at the point of progress within tertiary training the rate of those whose parents are not degree holders is lower (Veroszta, 2013). Similarly, students whose parents have lower educational attainment are overrepresented among those

with poorer academic achievement and among those who fail to acquire a degree immediately after the pre-degree certificate.

A study conducted in 2014 among fresh graduates with disabilities pointed out that higher educational institutions are basically equipped with the support systems that assist students with physical or sensory disabilities⁹ (Duráczy, 2014). This is probably also due to the fact that since 2002 higher educational institutions are required by law to ensure equal opportunities for students with disabilities. This includes, among other obligations, appointment of disability coordinators, and creating rules for special exemptions and conditions to meet study and examination requirements. The same study underscored the fact that the critical period for students with disabilities is their exit from higher education when they are left without appropriate support easing their transition to the world of work.

SUMMARY

Our study explored the problems related to access to higher education by two disadvantaged groups, the socially disadvantaged and persons with disabilities. Based on the findings it is conspicuous that there are reserves in both groups despite the preferential treatment available to them; in other words, in these groups the number of those graduating from secondary education is much higher than the number of those continuing their studies at some point of time. In this regard it should be emphasized that the transition from secondary to higher education is short: the majority of persons with disabilities as well as of the socially disadvantaged apply for higher education immediately after leaving secondary school or within the next one or two years, therefore a lot rests with public education actors in providing career guidance.

The data also reveal that applicants with disabilities as well as socially disadvantaged applicants apply special strategies which, coupled with the extra points that may be granted in the application procedure increases their chances for admission. The application strategy can also be important with a view to finding a job or continuing with advanced studies: some disadvantaged groups tend to opt for less prestigious courses for the sake of easier admission, which does not necessarily give them long-term advantages in the labour market or in advanced studies.

Another consideration education policy makers should be aware of is the geographical location and uneven regional distribution of various target groups.

⁹ Although when it comes to granting preferential treatment the category of persons with disabilities is wider (it also includes persons with learning difficulties), the research focused on three groups: persons with hearing impairment, visual impairment and mobility impairment.

While applicants with disabilities are relatively homogeneous in terms of regional provenance, socially disadvantaged applicants are also encumbered with local and regional disadvantages. Two-thirds of them live in particularly underprivileged regions so in their case individual disadvantages are exacerbated by territorial disadvantages. This influences their choice of higher educational institutions and ultimately affects the institutional system: as many of them apply for institutions near their home some regions and some universities will have a larger concentration of disadvantaged students, and this will have ramifications in residence hall provision and social benefits.

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